Co-funded by the European Union

PoMiSA
Connecting Credentials Creating Futures

SYNTHESIS REPORT

The State of Play of Microcredentials:

Belgium/Flanders, Estonia, Ireland, Lesotho, Mauritius, Namibia & South Africa

AUTHORS:
Alida Herbst
Herman Van Der Merwe
Cornelia Schreck
Johan Freysen
Megan Barnard
Caroline Steel

Authors: Alida Herbst, Herman van der Merwe, Cornelia Schreck, Johan Freysen, Megan Barnard, Caroline Steel

External Reviewers: Robert Balfour, University of Western Cape, South Africa; Mairéad Nic Giolla Mhichíl, Dublin City University, Ireland.

Internal Reviewers: Estonia: *Maili Vilson*, Belgium/Flanders': *Frederik de Decker*, Ireland: *Nuala McGuinn*, Lesotho: *Papali Maqalika*, Mauritius: *Romeela Mohee*, Namibia: *Ngepathimo Kadhila*, South Africa: Representatives from the CHE, SAQA, Jet and UNISA.

Acknowledgement: Co-funded by the European Union. Views and opinions expressed are, however, those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Editing: Language Editing and Proofreading: Wendy Barrow

Layout and publishing: Axiom Academic Publishers

© 2025 PoMiSA

ISBN: 978-1-0370-6802-7

Kindly attribute as follows: Herbst, A., Van der Merwe, H., Schreck, C., Freysen, J., Barnard, M. & Steel, C. (2025). The state of play of microcredentials: Belgium/Flanders, Estonia, Ireland, Lesotho, Mauritius, Namibia & South Africa. PoMiSA.

Shared under a Creative Commons ShareAlike License Version 4.0 https://creativecommons.org/licenses/by/4.0/legalcode.
Users are requested to respect the copyright of all included works.

EXECUTIVE SUMMARY

Overview of the PoMiSA project and synthesis report

The *Potential of Microcredentials in Southern Africa (PoMiSA)* project is a collaborative initiative between universities and higher education entities in Southern Africa and Europe. It explores the role and potential of microcredentials within national and regional contexts, aiming to develop principles, policies, frameworks, and guidelines for their definition, quality assurance, regulation, recognition and provision in Southern Africa. Managed by a steering committee, PoMiSA involves 18 beneficiary institutions and is structured around five work packages (WPs): WP1 – project management; WP2 – state of play analysis; WP3 – regional consultations; WP4 – development of national concept papers; and WP5 – advocacy and communication.

This synthesis report is the final output of WP2. It draws on seven 'state of play' reports developed by teams from South Africa, Namibia, Lesotho, Mauritius, Estonia, Ireland, and Belgium/Flanders, each structured using a shared analytical framework. Through a comparative analysis of these reports, this synthesis provides insights to inform subsequent project activities and broader regional collaboration. A framework analysis methodology (FAM) was employed to examine the state of microcredential adoption, conceptualisation, policy development and implementation across highly diverse contexts. Despite significant variation, the analysis identifies shared challenges, emerging practices, and rich insights that not only advance the core aims of the PoMiSA project but also offer relevance and value to wider finternational audiences engaged in microcredential development.

Section 1: Contextual drivers and attractors for microcredential adoption

Contextual drivers and attractors significantly shape the role microcredentials can play in each national system. This section explores the demographic, socio-economic, technological, political, and educational contexts of the seven countries. While microcredentials are often associated with strategic innovation, lifelong learning, and labour mobility, their uptake and impact are shaped by underlying systemic conditions. Across regions, microcredentials are increasingly recognised as tools for economic transformation, skills upgrading, and educational responsiveness. However, in most Southern African partner countries, persistent inequalities in education access, high youth unemployment, and uneven digital infrastructure underscore the need for inclusive, adaptable, and low-bandwidth delivery models. European countries benefit from more evolved digital and educational ecosystems and stronger institutional alignment. This section highlights the need for microcredentials to be context responsive, for political commitment and system alignment, and for delivery modes that reflect the technological realities of intended learners.

Section 2: Microcredential conceptualisation

Understanding how microcredentials are defined and interpreted is essential to shaping stakeholder adoption and creating inclusive systems for their development and use. Section 2 explores how microcredentials are understood, defined, and valued across the seven PoMiSA countries. Definitions are shaped by education systems, labour market needs, local circumstances and global frameworks

such as the UNESCO and European Commission definitions. European countries have adopted more formalised definitions embedded in quality assurance systems, while most Southern African countries—except Mauritius—are still navigating definitional ambiguity amid growing interest. The section emphasises the importance of conceptual clarity for system integration, public trust, and learner mobility. Stakeholder perceptions strongly influence both design and uptake. To inform future developments in Southern Africa, five working definitions— derived from cross-country analysis—are offered. These aim to support ongoing PoMiSA dialogue around locally relevant and globally interoperable approaches to microcredentials.

Section 3: Microcredential policy development

Robust policy frameworks are central to sustainable microcredential development, quality assurance, and recognition. This section examines national efforts to integrate microcredentials into existing systems, with a focus on quality assurance and qualifications frameworks. European countries benefit from established structures like the European Qualifications Framework (EQF), which support comparability and mobility. In contrast, most Southern African countries are in the early stages of policy development, although Mauritius is advancing progress through coordinated strategies and engagement with quality assurance bodies. Other countries are considering how recognition of prior learning and institutional accreditation processes might be adapted. The section identifies key policy levers, including flexible quality standards, stackability, and stakeholder consultation, and highlights the importance of linking microcredentials to development goals. Inclusive and adaptable policy processes are necessary to ensure that microcredentials are embedded in national systems while remaining responsive to diverse user needs.

Section 4: Public and private sector microcredential providers

The development of meaningful microcredential ecosystems depends on active involvement across public and private sectors. This section reviews the evolving provider landscape in the PoMiSA countries, including universities, technical and vocational education and training (TVET) providers, professional bodies, non-governmental organisations (NGOs), and private training organisations. In European countries, public higher education institutions lead coordinated, credit-bearing provision aligned with national strategies. In many Southern African countries, provision remains exploratory and fragmented. Mauritius benefits from a nationally coordinated approach, with structured engagement from regulators and cross-sector stakeholders. Elsewhere in Southern Africa, provision is often informal, taking the form of short courses or continuing professional development without consistent recognition or quality assurance. The section highlights opportunities for co-delivery models and cross-sector collaboration, particularly in addressing workforce needs. It identifies enabling conditions for scalable provision, including regulatory clarity, infrastructure, and frameworks for articulation. A diverse and responsive provider ecosystem is essential to meeting learner and industry needs across formal and informal sectors.

Section 5: Microcredential implementation and effectiveness

The implementation of microcredentials is shaped by the readiness of institutions, the responsiveness of systems, and the evolving needs of learners and employers. Section 5 focuses on the implementation of microcredentials and the criteria under which they are likely to be effective. Implementation practices vary widely, shaped by national priorities, institutional capacity, and the availability of policy guidance. This section offers practical criteria and accompanying

checklists as a starting point for effective implementation.

Section 6: Conclusion

This section concludes this report and summarises the most critical recommendations of the synthesis according to specific categories.

Contents

Tables and figures

Acronyms and abbreviations

ACQF	African Continental Qualifications Framework
CAT	Credit Accumulation and Transfer
CEDEFOP	European Centre for the Development of Vocational Training
CHE	Council of Higher Education
CPD	Continuing Professional Development
DAB	Designated Awarding Bodies
DHET	Department of Higher Education and Training
EACEA	European Education and Culture Executive Agency
EC	European Commission
ECTS	European Credit Accumulation and Transfer System
EHEA	European Higher Education Area
EQF	European Qualifications Framework
EstQF	Estonian Qualifications Framework
EU	European Union
FQF	Flemish Qualifications Framework
GDP	Gross Domestic Product
GoL	Government of Lesotho
HE	Higher Education
HEC	Higher Education Commission
HEI	Higher Education Institution
HEQSF	Higher Education Qualifications Sub-Framework
ICT	Information and Communication Technology
ILO	International Labour Organisations
ISCO	International Standard Classification of Occupations
LQF	Lesotho Qualification Framework
MC	Microcredential
MoET	Ministry of Education and Training
MQA	Mauritius Qualifications Authority
NCHE	National Council for Higher Education
NCVTS	National Credit Value and Transfer System
NDP	National Development Plan
NFQ	National Framework of Qualifications
NEET	Not in Education, Employment, or Training
NGO	Non-governmental Organisations

NPMN	National Pathways Management Network
NQA	Namibian Qualifications Authority
NQF	National Qualifications Framework
NSDP II	National Strategic Development Plan II.
NSDS	National Skills Development Strategy
OECD	Organisation for Economic Co-operation and Development
PES	Public Employment Services
PEST	Political, Economic, Social and Technological (factors)
PISA	Programme for International Student Assessment
PoMiSA	Potential of Microcredentials in Southern Africa
RCC	Recognition of Current Competencies
RPL	Recognition of Prior Learning
SADC	Southern African Development Community
SADCQF	SADC Qualifications Framework
SAQA	South African Qualifications Authority
StatsSA	Statistics South Africa
STEM	Science, Technology, Engineering and Mathematics
TVET	Technical and Vocational Education and Training
Umalusi	General and Further Education and Training Council
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund
VLOR	Flemish Education Council
WP	Work Package

INTRODUCTION

PoMiSA

The Potential of Microcredentials in Southern Africa (PoMiSA) project is a collaborative initiative involving universities, national councils, and strategic partners from across Southern Africa and Europe. Co-funded by the European Union, the project brings together 18 beneficiary entities, including higher education providers and quality assurance bodies, under the guidance of a dedicated steering committee.

The PoMiSA project aims to develop principles and policies for recognising, quality assurance, and regulating microcredentials in Southern African countries in collaboration with European universities and higher education councils.

PoMiSA seeks to explore and support the transformative potential of microcredentials in the Southern African context by developing shared principles, frameworks, and policies for their recognition, quality assurance, and regulation. Through collaboration with European counterparts, the project aims to gain insights, promote discussion, and strengthen regional capacity and alignment in microcredential provision, contributing to more flexible, inclusive, and responsive education systems.

The overall PoMiSA Project involves five work packages (WPs) focusing on:

Figure a 1: Five work packages of the PoMiSA Project

Figure a 2: PoMiSA project partners

Synthesis report: Purpose, scope and limitations

This synthesis report is the principal output of WP2, led by the North-West University (NWU), South Africa. WP2 aimed to examine the current state of microcredential conceptualisation, provision, implementation, and policy development across participating countries and regions. The countries included in this comparative analysis were Estonia, Belgium/Flanders, Ireland, Lesotho, Mauritius, Namibia, and South Africa. As a first step, each country team produced a national 'State of Play of Microcredentials' report, using a shared, question-based analytical framework to guide inquiry and enable cross-country comparison. The final reports submitted by each country are available at: https://pomisa.hec.mu/ (See table below for citations and links.)

Each report was framed and structured using a common analytical framework consisting of four overarching research themes (see Table 2). Before addressing these themes, country author teams provided introductory contextual information, including:

- Geographical and population profile
- Socio-economic profile
- Technology saturation
- National education systems
- Attitudes to lifelong learning

The scope of this synthesis report is to draw together insights from the country reports to develop a consolidated analysis of microcredential conceptualisation, provision, implementation, and policy development across the PoMiSA countries—with a particular emphasis on implications for Southern Africa (in line with PoMiSA's broader aims). The use of a common template facilitated a degree of consistency in how information was presented, supporting comparative analysis through the framework analysis methodology (see Methodology section).

Table a 1: PoMiSA country reports

Country	Report
Lesotho	Maqalika, P., & Lekhori, M. (2024). *The state of play of micro-credentials in Lesotho*. PoMiSA. https://pomisa.hec.mu/documents/PoMiSA%20Country%20Report%20Lesotho%202024.pdf
Mauritius	Mohee, R., Roopchund, O., Baguant, N., Maghoo, V., Sungkur, K., Hurreeram, D., Khedo, K., & Venethethan, D. (2024). *The state of play of microcredentials: Mauritius*. PoMiSA. https://pomisa.hec.mu/documents/PoMiSA%20Country%20Report%20Mauritius%202024.pdf
Namibia	Beukes-Amiss, M., Demas, S., Tuaundu, C., Njembo, B., & Kadhila, N. (2024). *The state of play of microcredentials in Namibia*. PoMiSA. https://pomisa.hec.mu/documents/PoMiSA%20Country%20Report%20Namibia%202024.pdf
South Africa	Paterson, A., & McDonald, Z. (Eds.). (2024). *The state of play of microcredentials in South Africa*. PoMiSA. https://pomisa.hec.mu/documents/PoMiSA%20Country%20Report%20South%20Africa%202024.pdf
Estonia	Vilson, M., & Kührt, U. (2024). *The state of play of microcredentials in Estonia*. https://pomisa.hec.mu/documents/PoMiSA%20Country%20Report%20Estonia%202024.pdf

Belgium/Flanders	Decker, F., & Morlion, B. (2024). *The state of play of microcredentials in Belgium/Flanders*. PoMiSA. https://pomisa.hec.mu/documents/PoMiSA%20Country%20Report%20Flanders%202024.pdf
Ireland	Goode, E., Golden, S., Kelly, V., McGuinn, N., & O'Dea, M. (Eds.). (2024). *The state of play of microcredentials in Ireland*. PoMiSA. https://pomisa.hec.mu/documents/PoMiSA%20Country%20Report%20Ireland%202024.pdf

Table a 2: Research themes and overarching research questions

Research theme	Research questions
Microcredential conceptualisation	1.1 What are the key political, economic, social and technological drivers and attractors for adopting microcredentials in [your country/region]? 1.2 How do these drivers and attractors align with current educational and workforce trends? 1.3 How are microcredentials defined and understood by various stakeholders (educational institutions, students, employers, policymakers) in [your country/region]? 1.4 How do/could stakeholders' views on microcredentials impact their practical implementation?
Public and private sector microcredential providers	2.1 What is the current/projected role of public and private sector providers of microcredentials in [your country/region]? 2.2 What benefits do/could users gain from microcredentials offered by these providers? 2.3 What variations exist in the needs of microcredential users across formal, non-formal and informal education sectors?
Microcredential implementation and effectiveness	3.1 What criteria would indicate that microcredentials effectively meet their envisaged educational and vocational objectives in [your country/region]? 3.2 To what extent are the socio-economic impacts of microcredentials being considered, particularly regarding access, equity, and inclusion in [your country/region]? 3.3 How do industries respond to and/or recognise microcredentials, and what challenges and opportunities does this present? 3.4 What key factors are most likely to influence the implementation, impact, and long-term sustainability of microcredentials positively or negatively?
Microcredential policy development	4.1 How is/should quality assurance (be) managed for microcredentials in [your country/region]? 4.2 What progress has been made toward institutional and/or national standards in [your country/region]? 4.3 To what extent are microcredentials integrated into, or being considered for, integration with the national and regional qualifications frameworks? 4.4 What practical steps should be taken in developing national and regional microcredential policy frameworks?

METHODOLOGY

Framework analysis methodology (FAM)

This synthesis report used a framework analysis methodology (FAM) to examine data from the seven country reports. FAM offers a structured approach to qualitative analysis that supports comparison across standardised data sets, enabling researchers to answer predefined questions while remaining grounded in source data (Klingberg et al., 2024; Ritchie & Spencer, 1994). A 'best fit' framework synthesis was used, beginning with the shared PoMiSA question framework. This deductive approach allowed themes to be coded against predefined categories, with iterative adaptations to capture emergent themes. This means that, as coding progresses and themes emerge, the framework is adapted (as reflected in the headings of this synthesis report) so that the final report represents a 'best-fit' framework that includes modified factors and new factors that were not anticipated in the original model (Dixon-Woods, 2011).

Data sources

The synthesis drew on two primary and one secondary data source. The primary sources were:

1. Final country reports submitted by author teams from Lesotho, Mauritius, Namibia South Africa Estonia, Belgium/Flanders, and Ireland.
2. Validated high-level summaries of each country's responses to the framework, developed by the NWU and verified by author teams. These summaries helped address gaps in the reports and supported consistency across cases.

Appendix A provides a summary of the research methodologies followed by each of the contributing countries. The secondary source comprised webinar presentations (November 2024), in which country teams presented key findings.

Data analysis

A six-step data analysis process was followed:

1. **Familiarisation**: Each author reviewed all reports and was assigned one or two countries for deeper engagement to support contextual understanding.
2. **Coding**: Manual coding was conducted to produce initial summaries. Final reports were then uploaded to ATLAS.ti (v25), where deductive coding based on the framework was combined with inductive theme generation. AI-assisted coding supported consistency in theme identification.
3. **Charting**: Quotation data and codes were exported into a matrix structure, allowing synthesis by theme and country.
4. **Interpretation**: Authors compared coded data to identify cross-regional patterns, divergences, and gaps in relation to the original question framework.
5. **Drafting and triangulation**: Multiple drafts were developed and triangulated against original reports, ATLAS.ti outputs, validated summaries, and webinar insights. AI-driven language models, specifically ChatGPT (OpenAI) and Microsoft Co-Pilot, were employed to facilitate drafting, summarisation, and language refinement. These tools were employed to enhance the coherence and accessibility of the text but did not contribute to the conceptual development or interpretation of findings. The final content was rigorously reviewed and revised by the author(s) to align with

scholarly and ethical standards and ensure comprehensive representation of predefined and emergent themes.

6. **Review and dissemination**: The draft synthesis report underwent internal review by country teams and external review by experts from Southern Africa and Europe. Revisions were incorporated prior to finalisation. The approved report is available via the PoMiSA website and will be disseminated at the PoMiSA conference and other project events.

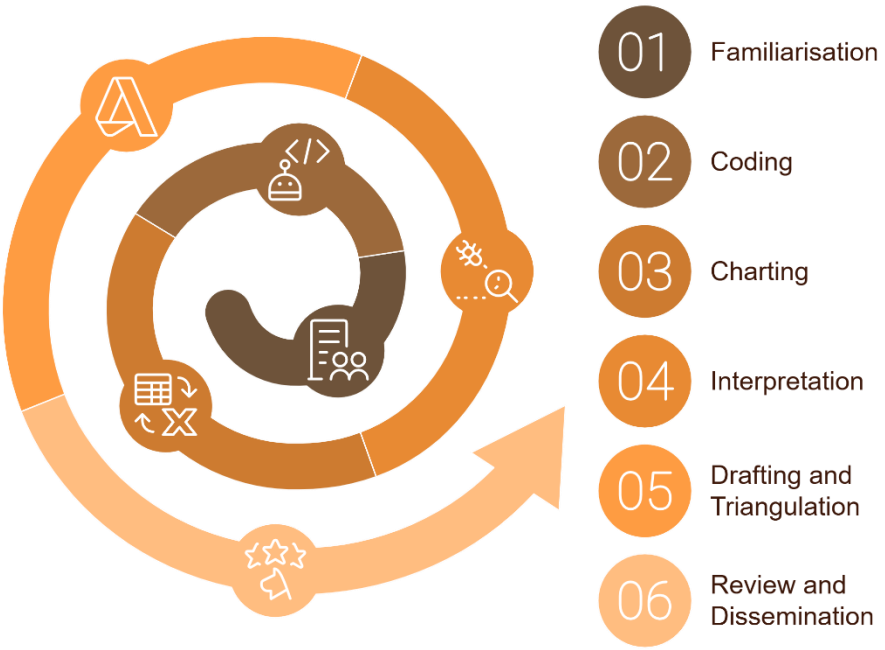


Figure a 3: Data Analysis Process

Limitations

During analysis it was noted that the content and depth of responses varied across country reports due to differences in contextual experience, data availability, and local validation processes. As a result, the consistency of information across the seven reports was sometimes uneven, and in some areas, direct comparisons were not always possible. This variation represents a limitation of the synthesis. To mitigate this limitation to some extent, the NWU team generated high-level summaries based on the original template, which were validated by the respective country teams. Importantly, the NWU team did not fill information gaps themselves; the scope of the synthesis was limited to data drawn directly from the country reports and validated summaries.

SYNTHESIS OF THE STATE OF PLAY OF MICROCREDENTIALS IN PoMiSA COUNTRIES

SECTION 1

CONTEXTUAL DRIVERS AND ATTRACTORS FOR MICROCREDENTIAL ADOPTION

1 CONTEXTUAL DRIVERS AND ATTRACTORS FOR MICROCREDENTIAL ADOPTION

This section outlines the contextual factors influencing the adoption or potential adoption of microcredentials across the seven PoMiSA countries. By examining geographical, socio-economic, technological, political, and educational dimensions, it identifies both drivers and barriers that shape national pathways toward microcredential implementation. The analysis highlights regional similarities, differences, and insights into the diverse contexts. This framing offers essential contextual grounding for this synthesis of PoMiSA country and regional microcredential conceptualisation, policy development, and implementation.

1.1 Geographical and demographic contexts

This section summarises the geographical and demographic landscapes of the seven PoMiSA countries, highlighting their varied population distributions, age profiles, and urbanisation patterns. These factors collectively shape distinct education delivery strategies and workforce development demands, influencing both the need for, and potential approaches to, microcredential adoption or exploration within each country.

Geographically (Figure 1-1), PoMiSA's Southern African partner countries represent a varied regional profile. Lesotho is a landlocked nation entirely surrounded by South Africa, which is located in the southernmost tip of the African continent and has coastlines along both the Indian and Atlantic Oceans. Namibia lies to the northwest of South Africa and borders the Atlantic Ocean. In contrast, Mauritius is an island nation located in the Indian Ocean, off the eastern coast of mainland Africa. The European partner countries comprise Estonia in Northern Europe along the Baltic Sea, Belgium (Flanders region) in Western Europe, and Ireland, an island nation in the North Atlantic Ocean.

In terms of population and urbanisation, considerable diversity exists across the PoMiSA country partners (Table 1-1). South Africa has a population exceeding 62 million, with a youthful demographic profile—21.6 million South Africans are aged 15–34 (Statistics South Africa [Stats SA], 2022). The country exhibits significant demographic variation, including densely populated urban centres (e.g., Gauteng 15 million) and dispersed rural communities (e.g., Northern Cape 1.3 million) (Stats SA, 2022). This profile necessitates diverse educational and workforce strategies to respond to varied population and gender needs. Namibia with a population of approximately 3.02 million and Lesotho with approximately 2.1 million (UN Population Division, 2019), also have predominantly youthful populations with approximately 71% and 76%, respectively, under the age of 35. Namibia is among the world's most sparsely populated countries, while Lesotho's population primarily resides in the lowlands with around 63% living in rural areas. These geographic and demographic realities highlight the importance of national education and workforce strategies tailored specifically to ensure equitable access and contextual relevance. Mauritius, with a relatively dense urbanised population of approximately 1.27 million, is distinct among the Southern African countries due to an ageing demographic profile, reflected in a median age of 38 years (Statistics Mauritius, 2022). This demographic structure influences Mauritius's strategic focus on targeted skills development and human development initiatives closely linked to key economic sectors.

https://www.mapsofworld.com/africa

https://www.mapsofworld.com/europe/

Figure 1-1: Geography: PoMiSA partner countries

Table 1-1: Demographic summary of PoMiSA countries

Country	Population (millions)	Dominant age group	Urbanisation
Lesotho	2.1	Youthful	Primarily rural
Mauritius	1.27	Ageing	Primarily urban
Namibia	3.02	Youthful	Primarily rural
South Africa	62.0	Youthful	Primarily urban, dispersed rural
Estonia	1.3	Ageing	Primarily urban
Belgium/Flanders	6.6	Ageing	Primarily urban
Ireland	5.15	Ageing	Primarily urban

The European partner countries, Estonia, Ireland, and Belgium/Flanders are comparatively small, geographically compact nations with primarily urban, ageing populations. Estonia has a population of 1.3 million and a median age of 43. Flanders, the Dutch-speaking northern region of Belgium, hosts 6.6 million of Belgium's 11.5 million people. Ireland, with a population of 5.15 million, has experienced an 8.1% increase since 2016 and has a median age of 38.8. Notably, 12% of its population comprises non-Irish citizens (Central Statistics Office Ireland [CSO], 2022). Estonia and Ireland support focused educational and workforce policies that are largely responsive to sectoral demands. Belgium/Flanders similarly benefits from a concentrated urban demographic.

Cross regional insights: Geographical and demographic considerations

While the Southern African and European PoMiSA countries differ in terms of population scale, age distribution, and urbanisation, all face demographic dynamics that influence education delivery and workforce planning. The Southern African countries, with predominantly youthful and often rural populations, must contend with equitable access challenges across dispersed regions and varied socio-economic settings. In contrast, the European countries are generally more urbanised and characterised by ageing populations, which brings urgency to workforce renewal and lifelong learning. In both contexts, microcredentials may offer context-responsive mechanisms—either to reach underserved youth populations or to facilitate continuous upskilling among older workers—highlighting the importance of tailoring microcredential strategies to demographic and geographic realities.

Understanding these geographical and demographic contexts provides a foundation for appreciating how population distribution, urbanisation, and demographic characteristics shape each country's strategic considerations and opportunities for adopting microcredentials.

1.2 Socio-economic contexts and workforce drivers

This section explores the socio-economic conditions and workforce trends shaping education to employment pathways in PoMiSA countries. It examines the economic profiles, unemployment rates, youth employment—including young people not in education, employment, or training (NEET)—key economic sectors, and workforce trends. Collectively, these socio-economic factors and workforce drivers influence both the demand for, and potential approaches to, microcredential adoption or exploration, shaping their strategic relevance within diverse national and regional contexts. Key elements from each country are detailed below.

Lesotho, a lower-middle-income country (UN Population Division, 2019), faces substantial socio-economic challenges, including high youth unemployment, with 50% living under the poverty line (Sulla et al., 2019), and significant urban–rural and gender disparities in employment. Around 76% of the population is under 36 (UN Population Division, 2019), making youth a priority for education attainment and employment support. Rural youth employment stands at just 21%, compared to 54% in urban areas (World Bank, 2022). Despite higher educational attainment among women, misalignments persist between their qualifications and labour market demands (Posarac et al., 2021). The economy is dominated by textiles, agriculture, and mining—sectors vulnerable to external shocks and requiring targeted upskilling. In this context, microcredentials could offer accessible, affordable short-term training aligned with local needs, particularly in sectors like textile manufacturing where formal education levels are low.

Mauritius presents a relatively stable socio-economic context (Statistics Mauritius, 2022), having shifted from a mono-crop economy to a diversified structure encompassing manufacturing, tourism, financial services, and information and communication technology (ICT). While economic growth has remained steady and poverty is comparatively low, youth unemployment and skills mismatches persist (HEC, 2023), affecting education-to-employment alignment. As Mauritius moves towards a knowledge-based economy, demand is rising for adaptable skills in ICT, finance, and the blue economy. In response, microcredentials are gaining traction as flexible tools for upskilling both young professionals and older workers. Their targeted nature supports employability, inclusion, and national development priorities outlined in the National Skills Development Strategy (NSDS) 2022–2026.

Namibia, an upper-middle-income country (NSA, 2024), faces significant socio-economic variability shaping workforce trends and educational needs. Despite recent recovery driven by mining and natural resource exports, unemployment remains high at 33.4% (Bank of Namibia, 2024; Shiimi, 2024), particularly among youth. Graduate unemployment nearly doubled from 17% in 2017 to 32% by 2021 (NCHE, 2022), reflecting critical mismatches between education and labour market demands. Key sectors—mining, agriculture, and tourism—present distinct opportunities requiring specialised skills. Vision 2030, as supported by medium term National Development Plans, positions microcredentials as part of a broader industrialisation agenda, particularly for emerging sectors such as green hydrogen and renewable energy (Shimpanda, 2015). In this context, microcredentials offer targeted, flexible training aligned with sectoral priorities and evolving workforce needs (Cedefop, 2023).

South Africa faces persistent challenges of poverty, unemployment, and inequality, rooted in historical disparities linked to race, gender, and socio-economic status. These factors continue to shape educational attainment and employment outcomes (Reddy & Mncwango, 2021). Unemployment remains high, reaching 32.9% overall and 59.7% among youth aged 15–24, with NEET rates at 43.8% (Stats SA, 2024). Language diversity, geographic disparities, and migration—particularly in provinces like Gauteng—add further complexity (Stats SA, 2022). While sectors such as finance and trade are expanding, others, including manufacturing and community services, are declining (Stats SA, 2024). Key industries such as mining, energy, and tourism present opportunities for skills development. Microcredentials, if aligned with evolving workforce demands and accessibly designed and priced, could help to support transitions into employment, especially for marginalised youth and underrepresented communities (RSA, 2024).

Estonia has a small, highly digitalised economy built around innovation-driven sectors such as ICT, e-governance, financial services, and advanced manufacturing. Despite this, regional disparities persist, with rural areas facing lower employment opportunities and wages (EuroStat, 2020). Youth unemployment, gender gaps, and skills mismatches remain ongoing challenges. Labour shortages—partly driven by skilled worker emigration and qualification mismatches—have led to increased reliance on foreign labour. An ageing population adds further pressure for workforce renewal and upskilling. As automation reshapes traditional industries, there is growing demand for agile, short-form learning solutions. Estonia's government and social partners promote adult learning and labour adaptability through policy incentives and funding. Within this context, microcredentials are positioned as tools to deliver sector-specific, in-demand skills—particularly in digital and technical fields—while enhancing access to lifelong learning and promoting inclusive workforce participation.

Flanders, the northern region of Belgium, has a highly developed, service-oriented economy with key sectors including chemicals, pharmaceuticals, logistics, and advanced manufacturing. Its socio-economic policies align with European Union directives, emphasising lifelong learning, digitalisation, and equitable access for vulnerable groups such as older adults and lower-skilled workers. Although unemployment is relatively low, the labour market is rapidly evolving, with rising demand for highly qualified workers and growing vacancies in key occupations (De Smet et al., 2021; De Vos et al., 2021). Demographic ageing further amplifies upskilling needs. In this context, microcredentials are being developed as flexible, modular tools to support targeted reskilling, promote workforce adaptability, and expand access to learning among underrepresented groups.

Ireland's high-income, export-oriented economy is driven by advanced sectors including pharmaceuticals, information

technology, medical devices, and financial services. In 2023, services accounted for 70% of gross domestic product (GDP), with industry contributing 29% (CSO Ireland, 2024). Despite low unemployment (4.6%), global competitiveness creates ongoing pressure for upskilling and adaptability. Persistent skills shortages in digital, finance, and healthcare sectors highlight the need for responsive training. Government-backed initiatives like Skillnet Ireland foster enterprise-led workforce development and close collaboration between employers and education providers. Within this context, microcredentials are positioned to address sector-specific skill needs, offering modular, industry-aligned learning pathways that support adaptability, inclusion, and workforce responsiveness in Ireland's dynamic knowledge economy.

Table 1-2: Socio-economic summary of PoMiSA countries

Country	Income level	Unemployment	Key economic sectors	Microcredential opportunity
Lesotho	Lower-middle	High youth unemployment	Textiles, agriculture & mining	Targeted, low-cost microcredentials to support accessible training in sectors like textiles and agriculture.
Mauritius	Upper-middle	Moderate youth unemployment	ICT, finance, tourism, manufacturing	Sector-responsive microcredentials to support the knowledge economy and inclusive access to lifelong learning.
Namibia	Upper-middle	High youth and graduate unemployment	Mining, agriculture, tourism, green energy	Flexible microcredentials aligned with Vision 2030 priorities, to address emerging sector needs and support industrialisation.
South Africa	Upper-middle	Very high youth unemployment and NEET	Mining, energy, tourism, manufacturing, finance	Microcredentials to improve education–employment alignment, particularly for underrepresented and marginalised groups.
Estonia	High	Low unemployment	ICT, e-governance, financial services, advanced manufacturing	Agile, sector-specific microcredentials supporting digital skills, workforce adaptability, and lifelong learning.
Belgium/ Flanders	High	Low unemployment	Chemicals, pharmaceuticals, logistics, technology	Modular learning for reskilling and inclusion; alignment with EU and regional labour policy priorities.
Ireland	High	Low unemployment	ICT, pharmaceuticals, medical devices, financial services	Industry-aligned microcredentials supported by public–private initiatives like Skillnet; enabling flexible, employer-responsive learning.

Cross regional insights: Shared drivers and contextual differences

While the Southern African and European PoMiSA countries differ in economic scale and development trajectories, they share common challenges around aligning education and training systems with evolving labour market needs. Both regions face skills mismatches, growing demand for flexible learning options, and the need to improve participation among underrepresented groups. However, the context differs: in Southern Africa, microcredentials are often framed as a means to expand equitable and cost-effective access to learning and to support skills development and address employment gaps amid high youth unemployment and systemic inequalities. These equity aspirations are yet to be applied and proven in practice. In contrast, European countries are focused on labour market adaptability and lifelong learning in response to digitalisation, population ageing, and sector-specific shortages. These differences underscore the importance of context-sensitive approaches to microcredential design and implementation, grounded in national priorities and institutional capacities.

While economic and labour market factors shape demand for new forms of skills development, the readiness and reach of digital infrastructure and technologies critically influence how microcredentials can be accessed, delivered, and scaled.

1.3 Technological saturation, readiness and drivers

This section examines the technological infrastructure and digital readiness of each PoMiSA country, with a focus on connectivity, access to devices, digital literacy, and the role of technology in shaping microcredential adoption. While many international models prioritise online delivery, this analysis recognises that microcredentials do not have to be digital-only. In contexts where technological access remains uneven—particularly in parts of Southern Africa—blended or face-to-face delivery formats may offer more inclusive and practical pathways. The examples below highlight how national conditions influence the accessibility, scalability, design, and delivery of microcredential initiatives.

Lesotho, which identifies ICT as a development priority, has one of the lowest levels of technology adoption among PoMiSA countries. In 2017, while 78% of the population owned mobile phones, only 34.9% had accessed the internet, and rural electrification remained at just 34.9% compared to 77.7% in urban areas (Lesotho Communication Authority, 2017). Infrastructure challenges continue to constrain online learning, particularly in rural areas (KESI Business Solutions, 2022). Digital literacy is uneven, and while ICT features in national development strategies, investment in digital education remains limited. In this context, microcredentials require blended or face-to-face delivery formats to support equitable access and promote participation in skills development.

Mauritius has made significant progress in digital transformation, with broadband penetration at 87% and internet access reaching 75% of the population (ADEA, 2022). By 2020, 78.5% of households were connected, though rural disparities persist. These conditions support the delivery of flexible, responsive learning through microcredentials. The National ICT Strategic Plan (2018–2023) underscores a strong policy commitment to digital development, including smart cities and a digital economy. Microcredentials align with this agenda by enabling targeted upskilling in tech and emerging sectors and expanding access for underserved groups. Their modular format supports inclusive, lifelong learning aligned with national goals for workforce participation and economic diversification.

Namibia's digital landscape is constrained by persistent infrastructure gaps, particularly in rural areas with limited electricity and internet

access. Although mobile usage is rising, high internet costs and low broadband penetration restrict online learning. The 2021 Digital Transformation Strategy seeks to address these disparities and promotes e-learning platforms as vehicles for education and development. However, limited funding and equipment remain barriers. Concurrently, science, technology, engineering and mathematics (STEM) skill shortages and national upskilling needs highlight the importance of improving digital readiness. In this context, microcredentials must offer adaptable formats—offline, blended, or face-to-face—to support equitable access, align with national reskilling priorities, and enable context-sensitive pathways into the workforce.

In **South Africa**, widespread mobile phone ownership offers potential for microcredential delivery, yet digital inclusion remains uneven due to socio-economic inequality and geographic disparity. Urban areas benefit from better infrastructure, while rural and remote regions face limited connectivity and high data costs. Language is also a barrier, with English—the dominant language of most platforms—not spoken at home by many. Despite digital transformation efforts, affordability and infrastructure gaps limit scalability. Migrants and low-income youth often experience compounded exclusion. To prevent deepening inequalities, microcredentials must accommodate diverse access needs through offline, blended, and culturally and linguistically responsive delivery models that extend reach and relevance for marginalised groups.

Estonia was ranked 7th in the 2021 Digital Economy and Society Index (DESI), reflecting its strong digital public services (European Commission, 2022). Over 90% of the population has internet access, supported by a robust digital infrastructure built through the e-Estonia initiative. High digital literacy is embedded in the education system, fostering strong foundations for lifelong learning. Although rural areas face slower speeds and fewer public access points, national connectivity remains high. Estonia's digital-first policies enable seamless integration of microcredentials into e-governance and learning platforms, supporting flexible delivery for adult learners and aligning with national goals for upskilling and labour market responsiveness (Ministry of Education and Research of Estonia, 2021).

Belgium/Flanders is among Europe's most digitally advanced regions, with widespread internet access and strong digital literacy. However, digital divides persist among lower-skilled workers, those in temporary roles, and older populations. In response to rapid technological change—especially in automation, robotics, and green technologies—the government has introduced targeted digital skills initiatives. According to the Organisation for Economic Co-operation and Development (OECD), 14% of jobs are at high risk of automation, with another 29% facing significant transformation (OECD, 2021). Given this uncertainty, microcredentials offer a flexible solution for reskilling, particularly for technical competencies, including STEM competencies, to support Belgium/Flanders' broader digital and green transition goals.

Ireland has established strong digital infrastructure and widespread technological adoption, supporting the expansion of microcredential delivery. With 94% of households online and 96% accessing the web via smartphones, digital engagement is high across demographics (CSO, 2024). The country's ICT sector employs over 106 000 people and is the world's second-largest exporter of IT services (IDA Ireland Technology, 2024). Most individuals regularly use online services, including email, banking, and shopping. While an urban–rural divide persists, initiatives like free library Wi-Fi help bridge access gaps (Local Government Ireland, Libraries, 2024). Microcredentials are enabled by high digital literacy and policies supporting lifelong learning and workforce adaptability (OECD, 2023).

Table 1-3: Technology saturation summary of PoMiSA countries

Country	Digital infrastructure	Digital literacy levels	Viable microcredential modality
Lesotho	Limited, particularly in rural areas	Low to moderate	Blended, low-tech, mobile and non-digital formats
Mauritius	Strong, with some rural disparities	Moderate to high	Digital and blended
Namibia	Uneven, with significant rural infrastructure gaps	Variable by region	Blended, low-tech, mobile and non-digital formats
South Africa	Strong Urban access, rural gaps	Variable with access barriers	Blended, low-tech, mobile and non-digital formats
Estonia	Highly developed and integrated	High	Fully digital
Belgium/ Flanders	Highly developed with equity focus	High	Fully digital
Ireland	High developed with rural support	High	Fully digital

Cross regional insights: Technological saturation, readiness and drivers

Across the PoMiSA countries, varying levels of digital access, literacy, and infrastructure shape the feasibility and design of microcredential delivery. Southern African countries—Lesotho, Namibia, and South Africa—face rural connectivity gaps, high data costs, and uneven digital literacy, requiring blended, mobile-enabled, or offline formats. Mauritius shows stronger ICT infrastructure, though rural inclusion remains a concern. In contrast, Estonia, Belgium/Flanders, and Ireland benefit from advanced digital ecosystems and high literacy levels, supporting fully online, flexible models aligned with lifelong learning and economic goals. These differences highlight the need to tailor microcredential design to local technological conditions, ensuring accessibility, affordability, and relevance.

While infrastructure and digital readiness influence delivery models, the feasibility and long-term value of microcredentials also rely on political will, education system priorities, and national commitment to microcredential pathways.

1.4 Political and educational contexts and drivers

This section examines how national political contexts and education system drivers shape the landscape for microcredential adoption or exploration across the PoMiSA countries. It explores how governmental priorities, strategic planning, and institutional reforms influence national commitments to lifelong learning, workforce development, and education system responsiveness. Lifelong learning is deeply interconnected with a country's population dynamics, socio-economic conditions, technological development, and education systems (Håkansson Lindqvist et al., 2023; Langthaler & Bazafkan, 2020). Key areas of focus include learning, reskilling and upskilling initiatives, and cross-sector partnerships. Together, these political and educational factors frame the readiness and relevance of microcredentials as tools to address evolving learning and labour market needs.

In **Lesotho**, political and educational strategies prioritise improved access, recognition, and inclusion across the education and training system. The country has implemented a National Qualifications Framework (NQF) and participates in the Southern African Development Community Qualifications Framework (SADCQF), promoting regional qualification recognition and mobility. The National Policy for Implementation of Recognition of Prior Learning (RPL) supports validation of informal and non-formal learning to enhance employability and cross-border mobility (Ministry of Education and Training of Lesotho, 2022). Despite these frameworks, structural challenges—particularly in rural areas—continue to limit participation in lifelong learning. Secondary education completion rates remain low in rural regions (10%) compared to urban areas (50%), reflecting barriers such as school accessibility, resource limitations, and socio-cultural constraints. Lesotho's National Strategic Development Plan II (NSDP II) promotes flexible learning pathways, with microcredentials offering a relevant tool to extend opportunities to underserved and geographically dispersed populations.

In **Mauritius**, political and educational priorities reflect a strong commitment to lifelong learning, equitable access, and education system modernisation. The Higher Education Commission (HEC) and the Quality Assurance Authority (QAA), established under the Higher Education Act 2017, regulate the sector and oversee quality standards. Microcredentials are increasingly prominent in strategic planning with the Higher Education Commission Strategic Plan 2022-2025: Building a Responsive and Resilient Higher Education Sector, and its three-year Action Plan (2024–2026) identifying microcredentials as a mechanism to enhance flexibility, relevance, and articulation between TVET and higher education. National initiatives also support credit transfer, student mobility, and RPL, with draft RPL guidelines for higher education under review. Free access to education, from pre-primary to tertiary levels and comprehensive reforms have widened educational access. TVET is regulated by the Mauritius Qualifications Authority (MQA) to improve articulation between education, training, and employment and to ensure training responds to industry (UNEVOC, 2022). These reforms, aligned with the national goal of becoming a regional education hub and transitioning to a high-income economy, position microcredentials as strategic tools for workforce readiness and international competitiveness.

Namibia's education and training priorities are guided by competency-based learning and alignment with national development goals. Vision 2030 and successive National Development Plans (NDPs) emphasise industrialisation, workforce readiness, and emerging sectors such as green hydrogen and renewable energy. These priorities are underpinned by a comprehensive NQF, which integrates general, vocational, and workplace-based learning, and by Namibia's participation in the SADCQF. However, access and affordability—particularly in rural areas—remain significant barriers. Low secondary education retention beyond Grade 10 and graduate unemployment of 32% underscore enduring mismatches between education outputs and labour market needs. These structural challenges constrain participation in lifelong learning. In this context, microcredentials aligned with national industrial priorities may offer a flexible and targeted approach to addressing skills shortages, supporting workforce transitions, and advancing Namibia's broader development goals.

South Africa's NQF, overseen by the South African Qualifications Authority (SAQA), promotes access, mobility, and progression across formal and non-formal learning. The country also plays an active role in the development and implementation of the SADCQF, contributing to regional alignment on recognition and quality assurance. Lifelong learning is central to national education and

development strategies, with RPL positioned as a key inclusion mechanism. Despite these commitments, affordability, structural inequality, and limited support for essential education-related expenses continue to restrict access, especially in low-income and rural areas. The National Skills Development Plan (NSDP) prioritises competency-based training and labour market alignment, with microcredentials identified as a possible pathway to address youth unemployment and improve workforce readiness. While tertiary education improves likely employment outcomes, high NEET rates point to a need for more support for flexible, accessible education-to-employment pathways.

Estonia's education system is guided by strong national frameworks focused on quality, equity, and labour market responsiveness. The Estonian Qualifications Framework (EstQF) and Education Strategy 2021–2035 prioritise flexible, inclusive learning and aim to increase adult participation in formal and non-formal education. Broader strategies, including Estonia 2035 and EU alignment, position microcredentials as tools for upskilling and labour force adaptability. Participation in lifelong learning is actively promoted by the Estonian government to address skill gaps—particularly in the tech and green sectors. While higher education is tuition-free in Estonia, limited public funding constrains system growth. Political support for microcredentials is clear, though private provision remains loosely regulated. In this context, microcredentials are framed to increase responsiveness and flexibility across higher and vocational education, particularly when aligned with labour needs and supported by public and employer incentives.

In **Belgium/Flanders**, education is governed by the Flemish Community, which oversees legislation, funding, and strategic priorities. Lifelong learning is a key policy focus, supported by their action plan for a 'learning society' developed by wide ranging stakeholders from Lifelong Learning Partnership that was established by the Flemish government. The Flemish Qualifications Framework (FQF), referenced to the European Qualifications Framework (EQF), are integrating microcredentials to ensure they are recognised across the broader educational and professional landscape. Belgium/Flanders aims to increase participation in lifelong learning to 60% by 2030. Microcredentials are positioned as a strategic tool to support upskilling, reskilling, and system responsiveness, reinforced by strong institutional support, legislation, and alignment with EU policy.

Ireland has a comprehensive NFQ, formally aligned with the EQF, supporting recognition and comparability across borders. Microcredentials are an increasing focus for the government, politicians, policy makers, and educational leaders in Ireland (Brown et al., 2023). Government endorsement of both university microcredentials and further education and training colleges (FET) micro-qualifications has strengthened their legitimacy (Department of Enterprise, Trade & Employment, 2023; Department of Further and Higher Education, Research, Innovation and Science, 2024; IUA, 2023). Strong political and institutional commitment to lifelong learning is reflected in initiatives such as the National Skills Strategy 2025, Springboard+, and Skillnet Ireland, which prioritise upskilling and workforce responsiveness in key sectors. Quality assurance frameworks support recognition and stackability, enhancing their utility across learning pathways. Ireland's high tertiary attainment, cross-sector collaboration, and coherent policy infrastructure position microcredentials as integral to future learning and work.

Table 1-4: Educational and policy summary of PoMiSA countries

Country	Lifelong learning focus	Qualifications framework	Microcredential policy direction
Lesotho	Expanding access and recognition	NQF + SADCQF participation	Support inclusion and flexible learning pathways
Mauritius	Flexibility, relevance, and internationalisation	NQF (HEC and MQA-led reforms) + SADCQF	National action plans and TVET–HE integration
Namibia	Skills for industrialisation and youth employment	NQF + SADCQF alignment	Vision 2030 and emerging sectors like green energy
South Africa	Inclusion, RPL, and support for education-to-work transition	NQF + SADCQF; SAQA-led	Part of response to NEET challenge and systemic inequality
Estonia	Workforce adaptability and digital learning	EstQF (aligned with EQF)	National strategies and e-learning systems
Belgium/ Flanders	Upskilling and modular lifelong learning	FQF (aligned with EQF)	Supported by legislation and mapped to formal qualification levels
Ireland	Reskilling, industry alignment, flexible learning	NFQ (aligned with EQF)	Prioritised in policy and supported through national funding and endorsement

Cross regional insights: Technological saturation, readiness and drivers

Across the PoMiSA countries, national political and educational contexts reveal a shared recognition of the need to strengthen lifelong learning systems, workforce responsiveness, and inclusive access to skills development. While Southern African countries such as Lesotho, Namibia, and South Africa are exploring the potential of microcredentials within broader goals of equity, RPL, and systemic reform, their efforts are often constrained by affordability, access barriers, and underdeveloped adult learning ecosystems. Their European partners—Estonia, Belgium/Flanders, and Ireland—benefit from more mature lifelong learning policies, stable qualification frameworks, and sustained investment in adult education, allowing for more immediate integration of microcredentials into national upskilling strategies. A key insight across all contexts is that political commitment, aligned policy frameworks, and well-articulated education–labour pathways are central to realising the potential of microcredentials.

- ***Differences in system maturity, decentralisation, and institutional capacity shape how microcredentials are defined, governed, and implemented***

1.5 Section 1: Insights and recommendations

This contextual analysis provides a critical foundation for understanding the varying degrees of readiness, opportunity, and strategic alignment for microcredentials across the PoMiSA countries. The interaction of geographical, demographic, socio-economic, technological, political, and educational drivers influence both the demand for flexible learning pathways and the enabling conditions for microcredential development and uptake.

1.5.1 Section 1: Key insights

KEY INSIGHTS

1. **Microcredentials must be context-responsive.**
Persistent inequalities in access to education, infrastructure, and labour markets—particularly in Southern Africa—require the design of microcredentials that are accessible, affordable, and adaptable. Blended, face-to-face, or low-bandwidth delivery modes can widen participation among youth, women, and rural populations.

2. **Political commitment and system alignment are essential.**
The effectiveness of microcredentials depends on policy coherence, institutional capacity, and alignment between education and labour systems. Where these are underdeveloped, microcredentials risk remaining peripheral to national skills strategies.

3. **Delivery models must reflect technological realities.**
Technological readiness varies widely across and within countries. Digital-only models may exclude those most in need (especially in Southern Africa). To ensure inclusion, microcredential initiatives should leverage mobile platforms, offline access, and blended modalities tailored to local infrastructure and digital literacy levels.

4. **Recognition, trust, and clear pathways are critical.**
Embedding microcredentials in national qualifications frameworks, ensuring quality assurance, and linking them to recognised employment or educational pathways will be essential for building user trust and ensuring long-term value.

1.5.2 Section 1: Key recommendations

KEY RECOMMENDATIONS

1

Design microcredentials that are context-responsive.
When planning the design of microcredentials it is important to acknowledge the ongoing inequalities in terms of access to education, particularly in developing countries. This can be done in collaboration with industry partners to ensure they provide skills that are in demand. Clear pathways from microcredentials to employment opportunities, such as internships, apprenticeships, or direct job placements, should be established.

2

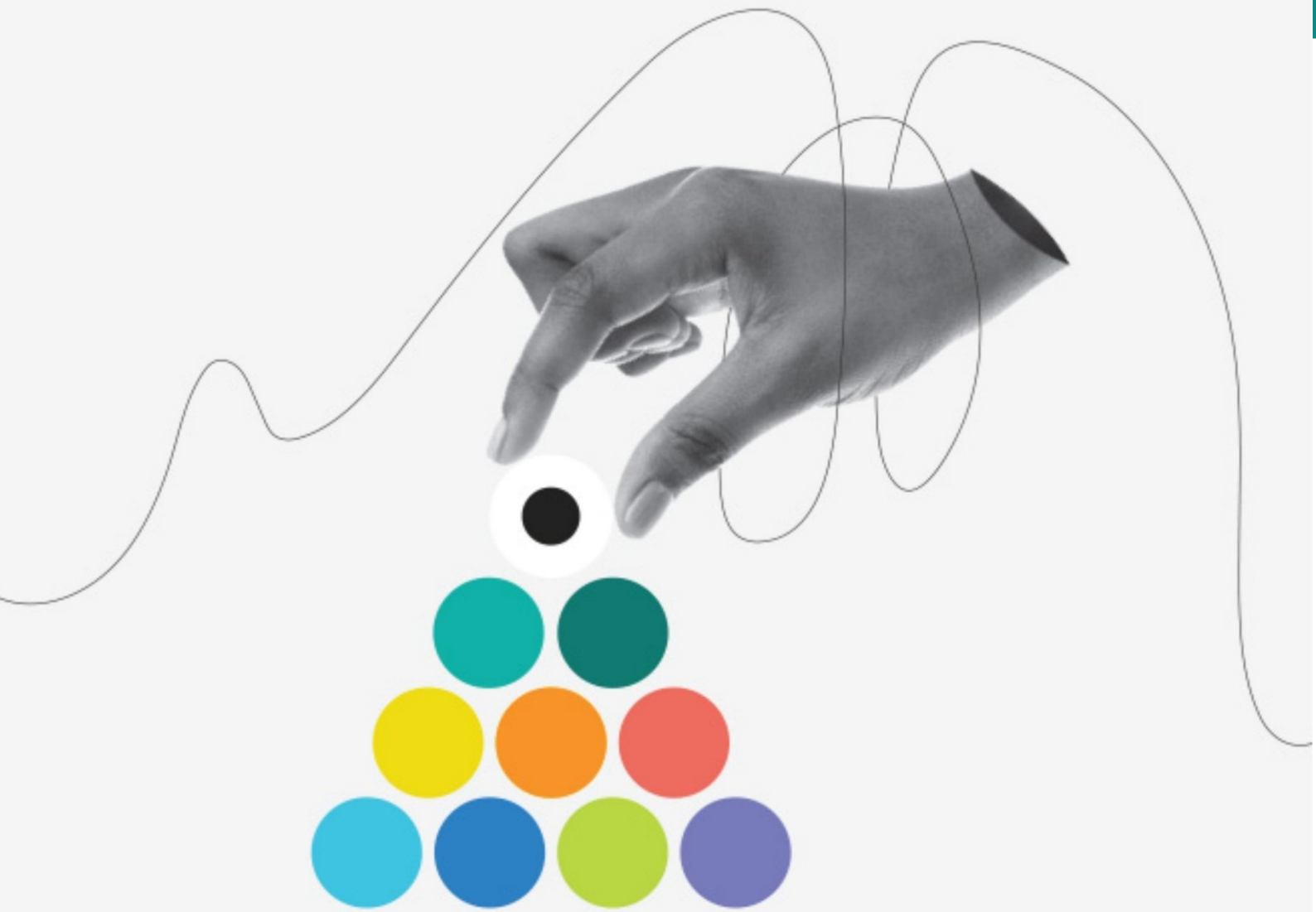
Foster political commitment and advocate for policy coherence.
Embedding microcredentials within national skills development plans will ensure they are a recognised and valued part of the country's approach to workforce development. This helps to align microcredential initiatives with national economic goals and labour market needs. This can be done through the development of a clear strategy for how microcredentials will be used to address skills gaps and enhance workforce readiness. This includes identifying priority sectors, target populations, and specific skills that are in demand.

3

Adapt delivery models to technological realities.
Tailor delivery models to the existing infrastructure and digital literacy levels. Options that could be considered include the use of mobile technology to deliver microcredentials, the provision of options for offline access to learning materials and assessments and the implementation of blended modalities. Additionally, offer training and support to help learners develop the necessary digital skills to engage with microcredential programmes and future work opportunities effectively.

4

Ensure trust, quality, and clear recognition pathways.
Transparency is key to building trust. Provide clear information about the value and recognition of microcredentials, including how they are assessed, the skills they certify, and their relevance to employment and further education. This can be done by embedding microcredentials in national qualifications frameworks and ensuring robust quality assurance. Establishing rigorous quality assurance processes is crucial. This includes setting clear standards for the development, delivery, and assessment of microcredentials. Link microcredentials to recognised employment or educational pathways to build user trust and ensure long-term value.



SECTION 2

MICROCREDENTIAL CONCEPTUALISATION

2 MICROCREDENTIAL CONCEPTUALISATION

Microcredential conceptualisation refers to how microcredentials are defined, understood, and integrated into national education, training, and skills ecosystems. In the PoMiSA countries, emerging definitions are shaped by multiple, intersecting factors—including labour market demands, institutional mandates, digital readiness, and political priorities—as well as by global frameworks and regional aspirations.

Stakeholder perceptions play a central role in shaping how microcredentials are valued and implemented. A thematic analysis of the PoMiSA country reports identified seven major domains influencing these perceptions: political commitment, economic feasibility, societal relevance, technological access, education and training capacity, labour market alignment, and regulatory readiness. These factors, outlined in Table 2-1, influence how microcredentials are being developed, recognised, and deployed across both Southern African and European partner countries.

This section explores how stakeholders across regions conceptualise microcredentials in theory and practice. It begins by examining the definitional and perceptual landscape in Southern Africa, followed by an analysis of European approaches. It concludes with cross-regional insights that inform future directions for PoMiSA's work on coherence, alignment, and policy development.

Table 2-1:Factors influencing stakeholder perceptions of microcredentials

Theme	Related sub-themes
Political factors	Political drivers, political will, political commitment
Economic factors	Economic drivers, economic challenges, financial support, affordability
Social factors	Social influence, societal needs, stakeholder perspectives, learner attraction
Technological factors	Technological needs, technological realities, technological advancements
Educational and training	Lifelong learning integration, professional development, continuous education, career progression and advancement, rapid upskilling, competency alignment, HEI regulations and practices, certification and qualification
Market and employability	Competitiveness, labour market needs, employer needs, employability, workforce challenges
Regulatory and strategic	National strategies and qualification authorities, regional recommendations, country-specific HE regulations

2.1 Southern Africa: Perceptions, definitions, and readiness

Across the Southern African countries involved in PoMiSA, formal definitions of microcredentials are still emerging. While terminology remains fluid, diverse stakeholders are beginning to articulate desired attributes that reflect national priorities. These include affordability, flexibility, practical relevance, and alignment with national qualifications frameworks. This section explores how each country is approaching the task of defining microcredentials, highlighting both common themes and context-specific considerations.

2.1.1 Lesotho

In Lesotho, stakeholders generally associate microcredentials with short, low-cost, and flexible learning experiences that are responsive to labour market demands, must be recognised by industry, and complement formal education. They see microcredentials as a form of assessed and validated evidence for specific learning outcomes or current competencies that focus on practical skills over theoretical forms of knowledge. Given the gaps in digital infrastructure, microcredentials may be offered virtually, in-person or in hybrid mode. Their purpose in Lesotho is as an alternate form of education designed to address poverty and unemployment, increase productivity, and respond to in-demand industry skill sets. Despite the lack of a consistent formal definition, the Ministry of Education and Training has been developing policies that address application of microcredentials within the current education and training framework. There is also a broad appreciation for their relevance in continuing professional development (CPD), RPL, their draft Credit Accumulation and Transfer Policy and in workforce alignment. However, terminology remains fluid, with references to "short learning programmes" and "modular courses" used interchangeably.

2.1.2 Mauritius

Mauritius has taken significant steps in their conceptualisation and definition for microcredentials. The HEC and the Mauritius Qualifications Authority (MQA), in collaboration with UNESCO International Institute for Educational Planning (IIEP), have facilitated multi-stakeholder consultations across higher education and TVET sectors. These efforts have helped generate a shared understanding. Microcredentials are viewed as instruments for aligning learning with personal, cultural, and labour market needs, and for expanding education and employment pathways. A formal definition is embedded in the National Credit Value and Transfer System (NCVTS), drawing on international frameworks and emphasising transparent assessment, portability, and rigorous quality assurance. They define microcredentials as:

> *Records of learning outcomes that a learner has acquired following a small volume of learning, assessed against transparent and clearly defined criteria. These learning experiences are designed to provide the learner with specific knowledge, skills, and competencies that meet social, personal, cultural, and labour market needs. Microcredentials are owned by the learner, can be shared, and are portable, meaning they can be transferred across different educational contexts. They may function as stand-alone qualifications or be combined to form larger qualifications. Crucially, they are underpinned by rigorous quality assurance processes to ensure adherence to agreed standards.*

The Mauritius report states that "this definition underscores several essential aspects: transparency and defined criteria, ensuring that the learning outcomes are measurable; flexibility and portability, allowing learners to

accumulate and transfer credits; relevance to various needs, making the microcredentials applicable to different sectors; and the importance of quality assurance to maintain high educational standards." (p.13)

In recent years, the HEC and the MQA engaged in significant work with the UNESCO IIEP on microcredentials to align national microcredential definitions and standards with global best practices. Together, they involved a wide range of stakeholders from higher education and TVET sectors as well as other sectors. These consultations have developed a conceptualisation of microcredentials that is consistent with international frameworks and ensured the inclusion of diverse stakeholder needs. While consultations have helped generate a shared understanding among higher education institutions (HEIs), TVET providers, and industry actors, the process is recognised as iterative, requiring ongoing dialogue and refinement.

2.1.3 Namibia

In Namibia, where the adoption of microcredentials is at an early stage, the absence of a unified national definition has contributed to some scepticism about their value. While TVET institutions have embraced microcredentials as practical, competency-based offerings, HEIs remain hesitant, citing concerns about encroaching on traditional qualifications and revenue streams. Namibia's National Qualifications Authority (NQA) has begun exploring how to accredit microcredentials as part of the government's strategy to support skilled workforce development and lifelong learning. The aim is to align microcredentials with the NQF, ensuring quality, standardisation, and recognition across the education system.

Workshop data collected by the Namibian author team, suggested that in the Namibian context, microcredentials could play a critical role in bridging the skills gap, particularly in sectors where the demand for specialised skills outpaces the supply of qualified workers—especially if there are clear standards and consistency to ensure that microcredentials are recognised and trusted across industries and the education sector. The workshop participants reached some consensus in line with literature from Cedefop (2023) and Kato et al. (2020) by characterising microcredentials as modular, flexible, stackable, and career relevant.

2.1.4 South Africa

In South Africa, defining microcredentials is considered an emergent exercise, as no single nationally agreed definition currently exists. The Department of Higher Education and Training (DHET) has raised concerns that "the lack of an agreed definition and global taxonomy" creates confusion, and highlights the need for broad stakeholder engagement, including industry and employers (DHET, 2022, pp. 1–2). The Council on Higher Education (CHE) similarly notes the lack of visibility regarding the scope, quality, relevance, and stackability of existing microcredential offerings (CHE, 2023). In response, stakeholders are discussing both international and national sources. The 2021 UNESCO definition, cited in the South African PoMiSA report, describes microcredentials as:

> ***… a record of focused learning achievement verifying what the learner knows, understands or can do; includes assessment based on clearly defined standards and is awarded by a trusted provider; has stand-alone value and may also contribute to or complement other microcredentials or macro-credentials, including through recognition of prior learning; and meets the standards required by relevant quality assurance (UNESCO 2021).***

More recently, an internal SAQA task team proposed a provisional national definition: *"a small unit of learning that is credit bearing, stand-alone, may be stackable, assessed, quality assured and certified"* (SAQA, 2022, p. 15). This reflects a growing recognition that microcredentials must be credible, quality-assured, and integrated with the NQF. Current policy frameworks already accommodate smaller learning units such as part qualifications, short learning programmes (SLPs), and skills programmes, which support flexible upskilling, reskilling, and pathways to full qualifications. A key focus is the articulation of formal, non-formal, and informal learning to expand access and portability. Regulatory clarity, system alignment, and employer recognition will be central to the successful implementation of microcredentials in South Africa.

2.1.5 Shared aspirations and systemic gaps

Across all four Southern African countries, stakeholders express a shared interest in developing credible, flexible, and equitable microcredential ecosystems. Key priorities include:

- Developing consistent and inclusive definitions.
- Enhancing recognition and portability across sectors and institutions.
- Aligning with national qualifications frameworks and quality assurance bodies.
- Validating informal and non-formal learning for equity and inclusion.
- Addressing digital infrastructure limitations, especially in rural areas.
- Expanding certification and stackable learning pathways.

Table 2-2 synthesises the specific attributes prioritised by each country. Collectively, these insights underscore the importance of developing context-responsive systems that integrate microcredentials into broader education and labour market strategies, while supporting mobility, employability, and lifelong learning.

Table 2-2: Southern Africa: Desirable Microcredential Attributes

Attribute	Lesotho	Mauritius	Namibia	South Africa
Format & delivery	Envisions short, low-cost, flexible; blended, low-tech, mobile, and non-digital formats	Envisions small volume learning; digital and blended formats	Envisions modular, flexible delivery; blended, low-tech, mobile, and non-digital formats	Envisions flexible short, adaptive learning; blended, low-tech, mobile, and non-digital formats
Purpose & sectoral relevance	Aims to address poverty, unemployment; increase productivity; labour market and societal needs	Aims to meet social, personal, cultural, and labour market needs; alignment with workforce and society	Aims to address sector-specific skills gaps and workforce relevance; include societal and personal development	Aims to support upskilling, reskilling, education to work transition; cross-sector – education, industry, community

Attribute	Lesotho	Mauritius	Namibia	South Africa
Learning outcomes	Proposes practical, competency-based learning outcomes; not theory-heavy	Proposes clearly defined, measurable learning outcomes aligned with industry needs	Proposes outcomes related to specific job-relevant skills; focused on competencies to bridge skill gaps	Proposes verified learning outcomes based on clear quality standards
Assessment	Establishing transparent, practical assessment, recognised, and validated by employers	Establishing assessment with transparent, defined criteria and tailored to job market	Establishing formalised assessment to effectively measure skills in high-demand sectors	Establishing assessment to validate outcomes and competencies transparently in alignment with market needs
Recognition & portability	Seeks industry recognition; complement formal education; portability across sectors and institutions	Seeks industry recognition; portability—regionally and internationally, and cross-sector transfer	Seeks industry and educational sector recognition; portability	Seeks recognition by employers; portability—regionally and internationally
Stackability	Seeks potential to build pathways towards qualifications	Establishing as stand-alone or be stackable into larger qualifications	Seeks stackability towards qualifications and skill needs in high-growth sectors	Seeks policy clarification and systemic alignment to operationalise stackability options
Rigorous & differentiated quality assurance	Emerging; not yet standardised, aspires to be rigorous	Underpinned by rigorous QA processes; alignment with international standards	Seeks alignment with national QA frameworks for consistent QA, trust, and transferability	Seeks rigorous, quality assurance approaches
Policy & framework alignment	Seeks strong linkage with CPD, RPL, and credit accumulation transfer (CAT); terminology not yet standardised	Establishing policy framework aligned with global and national standards	Seeks alignment with national qualifications and lifelong learning strategies	Seeks alignment with SAQA and NQF; to influence broader policy reforms
RPL, non-formal & informal learning	Seeks to validate prior informal and non-formal learning; supported through draft policies	Establishing alternate pathways to employment and education via RPL	Seeks to include non-formal learning to address skills gaps in underserved sectors; informal learning less defined	Seeks to align non-formal and informal learning with RPL and CAT systems as mechanisms for equity and access

Attribute	Lesotho	Mauritius	Namibia	South Africa
Certification	Seeks certification frameworks to ensure recognition and validation of skills and qualifications	Establishing certification aligned with the NCVTS—mandatory elements such as workload, outcomes, and awarding body	Seeks detailed and standardised certification processes to improve industry trust and cross-sector acceptance	Seeks to build certification systems that integrate seamlessly with the NQF; processes for validating SLPs

2.2 Europe: Perceptions, definitions, and readiness

Across the European PoMiSA countries—Estonia, Belgium/Flanders, and Ireland—microcredentials have gained traction through strategic policy alignment and increasing institutional uptake. On 16 June 2022, the Council of the European Union adopted a *Recommendation on a European approach to micro-credentials for lifelong learning and employability*[1]. This Europe-wide initiative responded to the absence of a common definition and standardised approach to microcredentials, as well as the need to build trust among countries, providers, and users. The Recommendation establishes a shared definition, quality assurance mechanisms, and portability guidelines to support the cross-border recognition of microcredentials across Europe. The European definition states:

> *A 'Micro-credential' means the record of the learning outcomes that a learner has acquired following a small volume of learning. These learning outcomes will have been assessed against transparent and clearly defined criteria. Learning experiences leading to micro-credentials are designed to provide the learner with specific knowledge, skills and competences that respond to societal, personal, cultural or labour market needs. Micro-credentials are owned by the learner, can be shared and are portable. They may be stand-alone or combined into larger credentials. They are underpinned by quality assurance following agreed standards in the relevant sector or area of activity (Council of the European Union, 2022).*

The Recommendation aims to support the development, implementation, and recognition of microcredentials across European institutions, businesses, sectors, and borders. While designed for the European context, its emphasis on adaptability and cross-border collaboration offers useful insights for the PoMiSA project. For example, how has the European definition been adapted by Estonia, Belgium/Flanders and Ireland? These insights may inform context-specific reflections on definitions, as well as quality assurance, recognition, and alignment within and across diverse national systems, without assuming a one-size-fits-all approach.

2.2.1 Estonia

In Estonia, microcredentials have emerged as a policy priority largely in response to EU recommendations and national strategies such as *Estonia 2035* and the *Education Strategy 2021–2035*, which promote flexible and lifelong learning. While there is currently no formal definition, legal amendments proposed in mid-2024 seek to standardise the structure, quality, and purpose of microcredentials

[1] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022H0627(02)

(Kultuurikomisjon [Cultural Affairs Committee of the Estonian Parliament], 2024). The draft legislation distinguishes between *microqualifications* and *microcredentials*, with a microqualification defined as "a set of verified and recognised knowledge and skills necessary primarily in the labour market or for meeting societal needs" (Explanatory Letter to the Amendments [Seletuskiri], p. 8). A microqualification may be designated a *microcredential* if: 1) it is offered by a recognised HEI, and 2) at least 50% of the programme consists of courses drawn from a higher education degree programme (Seletuskiri, p. 9). This emerging definition reflects an effort to align with the EU Recommendation on microcredentials while tailoring it to Estonia's national context.

Microcredentials in Estonia are primarily offered by HEIs and are typically characterised by short duration (0.5–1.5 years), targeted curricula, and formal certification. They are mainly designed for adult learners seeking specialised skills, often as part of formal education. Some microcredentials may be recognised for credit towards degrees via RPL; however, stackability and portability remain underdeveloped. Concerns persist that current offerings—often adapted from existing degree content—do not fully meet labour market needs. However, a formalised national framework has yet to be established, and HEIs currently apply different standards and structures, leading to inconsistency in provision. The current reform agenda seeks to resolve this by ensuring that microcredentials are outcomes-based, quality assured, and aligned with both national policy and employer expectations.

2.2.2 Belgium/Flanders

In Belgium/Flanders, while the EU definition and accompanying standards have not yet been legally enshrined and are perceived by some as overly broad, key stakeholders—including the Flemish Education Council (VLOR)—are advocating for formal legal recognition to improve consistency, raise awareness, and facilitate uptake. Microcredentials are broadly understood as records of assessed learning outcomes acquired through short, targeted learning experiences that are modular, quality assured, and responsive to labour market and societal needs. The term "microcredential" is used to describe both the learning activity undertaken and the digital credential awarded upon completion. Although definitions remain somewhat fluid, HEIs have embraced microcredentials within a flexible regulatory environment, offering them as both evidence of learning and SLPs—sometimes referred to as "microdegrees" when bundled together.

Implementation in Belgium/Flanders is gaining traction across HEIs, employers, and government bodies. HEIs view microcredentials as valuable tools for expanding access to lifelong learning and responding rapidly to emerging skills demands. Learners are motivated by their flexibility, speed, and personal development opportunities but call for stronger support systems to help lifelong learners re-enter education and manage competing responsibilities. Employers value the specificity and official validation of skills, seeing microcredentials as useful for both upskilling and personalised training solutions. The guarantee of quality and official credits is becoming increasingly important to employers. Further collaboration with industry and stronger employer endorsement could enhance the relevance and credibility of microcredentials in the labour market. In addition, policy development, targeted funding, and robust quality assurance measures will be essential for long-term sustainability.

2.2.3 Ireland

In Ireland, microcredentials are formally defined by the Irish Universities Association (IUA) in alignment with the Council of the

European Union's 2022 Recommendation as follows:

> *A micro-credential is the record of the learning outcomes that a learner has acquired following a small volume of learning. These learning outcomes have been assessed against transparent and clearly defined standards. Courses leading to micro-credentials are designed to provide the learner with specific knowledge, skills and competences that respond to societal, personal, cultural or labour market needs. Micro-credentials are owned by the learner, can be shared and are portable. They may be standalone or combined into larger credentials. They are underpinned by quality assurance following agreed standards in the relevant sector or area of activity. (IUA, 2024a)*

Irish policy and institutional frameworks reflect this European alignment, with microcredentials described as short, flexible, and often stackable offerings that support lifelong learning and skills development. Ireland's leadership in implementing the European approach is evidenced by its establishment of a national microcredential framework in 2022 and the availability of public subsidies for priority areas under the Micro-Credential Course Learner Subsidy scheme.

Stakeholder interpretations of microcredentials in Ireland are well articulated and integrated into national policy. Learners view them as accessible, career-relevant options for upskilling, reskilling, or pursuing personal growth. HEIs and FET providers support microcredentials as standalone or stackable offerings, emphasising accreditation, portability across borders, and integration into existing programmes. Employers value microcredentials for their clarity in articulating specific competencies, alignment with emerging industry needs, and potential to enhance workforce readiness. Government and quality assurance bodies play a central role in shaping the system. Agencies such as Quality and Qualifications Ireland (QQI) ensure alignment with national and EU standards and manage subsidy schemes that target skills gaps in priority areas. Strategic funding and policy alignment across these actors reinforce Ireland's cohesive approach to microcredentials and its commitment to international interoperability, quality assurance, and lifelong learning.

In summary, the European Recommendation has served as both a catalyst and a common reference point for national-level responses in Ireland, Estonia, and Belgium/Flanders. While each country has interpreted and implemented the Recommendation differently, their approaches reflect shared priorities around lifelong learning, workforce development, and education system flexibility. At the same time, local adaptations highlight the importance of aligning global guidance with national structures, stakeholder needs, and institutional capabilities. These experiences offer valuable insights for other regions—such as Southern Africa—seeking to develop contextually relevant microcredential systems that are coherent, inclusive, and responsive to both local and transnational goals.

2.3 Cross-regional insights

The comparison of Southern African and European experiences highlights both shared aspirations and structural differences in how microcredentials are defined, perceived, and integrated into education and training systems.

Across regions, **stakeholders increasingly recognise microcredentials as a mechanism for supporting flexible, inclusive, and responsive learning pathways.** They are viewed as valuable tools for addressing skills gaps, enabling career mobility, and enhancing lifelong learning. However, the levels of system maturity, policy coordination, and stakeholder engagement vary significantly.

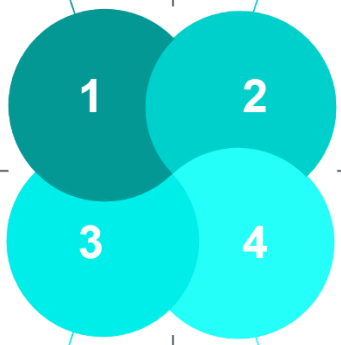
2.3.1 Key points of convergence

Growing interest in national definitions

Both regions emphasise the need for a shared understanding of what constitutes a microcredential. Southern African countries are in earlier stages of developing context-relevant definitions, while European countries have built on the EU Recommendation to establish or adapt national definitions.

Alignment with market needs

Across all countries, stakeholders value the potential of microcredentials to address sector-specific skill shortages, particularly in emerging or high-growth industries.



Importance of quality assurance

The credibility and uptake of microcredentials depend on clear standards, transparent assessment, and recognised certification. Quality assurance is a key concern across both regions.

Support for lifelong learning

There is a shared emphasis on enabling upskilling and reskilling across the life course. Flexibility, portability, and learner ownership are core to emerging conceptualisations.

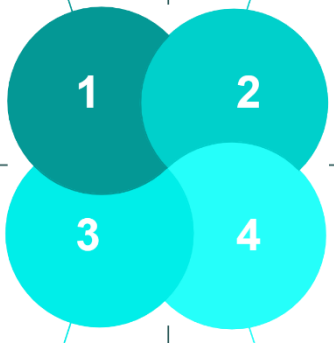
2.3.2 Key points of divergences

Regulatory maturity and policy coherence

European countries benefit from established regional frameworks (e.g. EQF) and coordinated national strategies. Southern African countries are still building the foundational policy, regulatory, and institutional mechanisms needed to support microcredentials.

Digital and institutional infrastructure

In Europe, widespread digital infrastructure and institutional capacity support microcredential delivery at scale. In contrast, infrastructure gaps—especially in rural areas—remain a consideration for access and implementation in parts of Southern Africa.



Stakeholder engagement

European countries have seen stronger employer and government involvement in microcredential design and implementation. In Southern Africa, engagement is emerging but still limited in most cases, particularly from employers and industries..

Recognition and system integration

While European countries are embedding microcredentials into national qualifications frameworks and ensuring stackability, Southern African systems are still working toward consistent integration and recognition across sectors.

2.3.3 Implications for PoMiSA

These cross-regional insights reinforce the importance of **contextualised approaches**. Rather than replicating European models, PoMiSA countries can draw on shared principles—such as transparency, quality, and alignment with learner and labour market needs—while designing fit-for-purpose frameworks. Inclusive stakeholder engagement, flexible delivery modes, and attention to equity and infrastructure will be key enablers of success.

The diversity of definitions and implementation pathways suggests that **flexibility and clarity** must go hand in hand. Ongoing dialogue between policymakers, providers, employers, and learners is essential to building coherent, credible, and sustainable microcredential ecosystems in the region.

2.4 Toward a PoMiSA working definition for microcredentials

A key objective of the PoMiSA project is to support the development of a contextualised understanding and definition of microcredentials to which all stakeholders can subscribe. This section offers five draft working definitions derived from the analysis of the PoMiSA country reports. These 'working definitions' are only intended to catalyse further discussion in forthcoming work packages—particularly WP3 (policy review) and WP4 (national concept papers for Lesotho, Mauritius, Namibia, and South Africa).

Each definition draws on different dimensions of stakeholder needs and system contexts in Southern Africa, reflecting variations in priority—such as socio-economic drivers, flexibility, system alignment, and workforce relevance. Collectively, they provide a foundation for dialogue on how best to frame microcredentials in ways that are relevant, inclusive, and future-oriented.

Definition 1: Focused towards socio-economic context

Microcredentials are flexible, affordable, and high-quality educational offerings that provide smaller-scale study opportunities tailored to professional development and industry-specific competencies. They are stackable, recognised certificates or training programmes focusing on continuous education and specialised knowledge, complementing other credentials, and supporting individual career growth. Microcredential offerings should consider political, economic, social, and technological (PEST) factors, emphasising clear learning outcomes and delivery methods suitable for diverse educational backgrounds and working adults. They align with national and international standards, such as the Common EU Standards, UNESCO's Microcredential Framework, the 2014 Addis Convention, and the recommendations of the forum of National Qualifications Frameworks in Africa, and aim to enhance lifelong learning and employability by recognising specific knowledge, skills, and competences.

Elements in focus:

- **PEST integration:** Emphasises contextual relevance by addressing Southern Africa's political, economic, social, and technological factors.
- **Equity and accessibility:** Recognises the need to reach underserved populations, including youth and rural learners.
- **Community relevance:** Highlights the role of microcredentials beyond employability—extending to social and community goals.

Definition 2: Skills-focused and sector-neutral

A microcredential is a formally or informally recognised record of specific skills, knowledge, and competencies acquired through a short learning experience. It is assessed against

transparent and clearly defined criteria, aligned with national or sectoral needs, and designed to address personal, societal, or labour market demands. Microcredentials are learner-owned, portable, and can be combined into larger qualifications. They are underpinned by quality assurance processes and may include formal, non-formal, or informal learning.

Elements in focus:

- **Cross-sector relevance:** Addresses personal, societal, and labour market needs.
- **Non-formal/Informal learning:** Supports recognition of diverse learning types.
- **Portability:** Enhances learner mobility across sectors and borders.
- **Quality assurance:** Ensures transparency and trust in assessed outcomes.

Definition 3: Tailored to national frameworks

A microcredential is a recognised and certified unit of learning outcomes achieved through short, focused learning experiences. These learning outcomes are aligned with NQFs or equivalent standards, addressing the specific demands of learners, employers, and communities. Microcredentials may be standalone or stackable, with quality assurance mechanisms ensuring their relevance, portability, and credibility. They encompass formal education and validate non-formal learning with pathways to larger qualifications.

Elements in focus:

- **Alignment with national systems:** Connects directly to qualifications frameworks for system integration.
- **Certification emphasis:** Responds to trust-building needs in emerging systems for credibility.
- **Stackability and portability:** Supports flexible learning pathways and credential accumulation.

Definition 4: Workforce and lifelong learning integration

A microcredential is a validated record of learning that certifies specific competencies, skills, or knowledge gained through short-duration learning experiences. It is designed to respond flexibly to societal, labour market, and lifelong learning needs, integrating formal, non-formal, and informal learning. Microcredentials are portable across sectors and borders, stackable towards larger qualifications, and supported by quality assurance frameworks that ensure recognition by employers, educators, and other stakeholders.

Elements in focus:

- **Focus on workforce integration:** Prioritises sector-specific upskilling and employer recognition.
- **Lifelong learning:** Integrates societal and personal learning pathways.
- **Cross-border mobility:** Supports regional and international recognition.
- **Quality assurance:** Ensures transparency, trust, and recognition.

Definition 5: Context responsive and adaptable

A microcredential is a certified record of assessed learning that verifies specific knowledge, skills, or competencies acquired through a short, flexible learning experience. It may be credit-bearing or non-credit-bearing, is quality assured, and can stand alone or contribute to broader qualifications. Microcredentials are designed to address social, economic, or labour market needs, support lifelong learning, and may be delivered through diverse modes. They are portable, recognised by relevant stakeholders, and adaptable to national education and training systems.

Elements in focus:

- **Dual pathways:** Encompasses both credit-bearing and non-credit-bearing credentials.
- **System adaptability:** Designed to fit varied regulatory and institutional contexts.
- **Stakeholder recognition:** Emphasises the role of employers, providers, and policymakers.
- **Flexible delivery modes:** Accommodates digital, blended, and in-person learning.

In summary, these working definitions are designed to support a structured dialogue across PoMiSA partners and stakeholders. Each definition foregrounds particular dimensions of microcredentials, such as national alignment, social equity, labour market needs, and cross-sector flexibility. Rather than prescribing a single fixed definition, this approach invites reflection on which elements are most important for different country contexts and what kinds of adaptations might be required. The definitions are intended to serve as a springboard for further policy discussions in future phases of the PoMiSA project.

2.5 Section 2: Insights and recommendations

2.5.1 Section 2: Key insights

This section explored how microcredentials are currently conceptualised across PoMiSA countries, focusing on stakeholder perceptions, definitional approaches, and system-level readiness. Key insights include the following.

KEY INSIGHTS

1. **Stakeholder perceptions shape implementation**: Learners, providers, employers, and policymakers influence how microcredentials are understood and valued. In both regions, there is growing interest, but variable awareness, engagement, and clarity—especially among employers and learners outside formal education.

2. **Definitions are still evolving**: In most of Southern Africa, terminology remains fluid, and definitional clarity is still emerging through consultation, experimentation, and early piloting. In contrast, European countries have adopted or are adapting the EU Recommendation, using it to anchor policy development and institutional action.

3. **Quality assurance and system alignment are critical enablers**: Both regions emphasise the need for robust, transparent quality assurance and clear integration into national qualification frameworks. This is especially important for building trust and supporting mobility across sectors.

4. **Equity and accessibility matter**: Southern African stakeholders consistently highlight the importance of designing microcredentials to reach underserved populations—including rural learners, youth, and informal workers—through flexible formats, affordability, and RPL.

5 **Cross-regional learning can inform national design**: While European countries benefit from more mature policy infrastructures, their adaptive use of a shared definition and emphasis on portability, stakeholder engagement, and learner ownership offer valuable lessons. However, direct replication is not appropriate; Southern African approaches must respond to contextual realities and development priorities.

2.5.2 Section 2: Key recommendations

Drawing from the insights across Southern African and European contexts, the following recommendations are proposed to guide PoMiSA partners and stakeholders in developing microcredential systems that are coherent, inclusive, and responsive.

KEY RECOMMENDATIONS

1 **Establish clear, context-relevant definitions**

- Develop national definitions that reflect local educational structures, workforce needs, and learner realities—while aligning with international principles such as transparency, portability, and quality assurance.

2 **Build inclusive stakeholder engagement processes**

- Engage employers, industry bodies, learners, and education providers in the design, validation, and refinement of microcredentials.
- Promote awareness campaigns and capacity building to improve understanding and support implementation.

3 **Prioritise quality assurance and certification**

- Embed microcredentials in national quality assurance systems, ensuring alignment with national qualifications frameworks.
- Develop standardised certification practices to enhance recognition across providers, sectors, and borders.

4 **Enable stackability and recognition pathways**

- Support the integration of microcredentials into broader qualification systems, enabling progression and accumulation of learning.
- Ensure flexibility in delivery and recognition of formal, non-formal, and informal learning through clear RPL and CAT mechanisms.

5 **Promote equity, access, and affordability**

- Design microcredentials to be accessible to diverse learners, including marginalised groups, by using blended, low-tech, and mobile-compatible delivery modes.
- Provide targeted funding or subsidy schemes to reduce barriers for low-income or rural learners.

6

Promote lifelong learning

- Integrate microcredentials into national lifelong learning strategies to promote continuous upskilling and reskilling, addressing evolving labour market demands
- Target vulnerable populations, including older adults, low-skilled individuals, and NEET groups, to enhance inclusivity and equitable access to lifelong learning benefits

7

Strengthen infrastructure and system readiness

- Invest in digital infrastructure, institutional capacity, and coordination mechanisms to support scalable, sustainable implementation.
- Develop national policies or frameworks that clarify roles, responsibilities, and pathways for integration

.

SECTION 3

MICROCREDENTIAL POLICY DEVELOPMENT

3 MICROCREDENTIAL POLICY DEVELOPMENT

Building on the preceding analysis of microcredential conceptualisation and stakeholder perspectives, this section examines the policy architectures that enable their practical implementation, quality assurance, and recognition. While definitional clarity is a necessary foundation, it must be supported by coherent policy frameworks—spanning institutional standards, regulatory instruments, and national or regional qualifications systems—to ensure that microcredentials are trusted, portable, and aligned with workforce and learner needs.

In the absence of clear and coordinated policy mechanisms, microcredentials risk becoming fragmented, inconsistently recognised, and misaligned with broader education and training systems. The transition from definition to delivery requires practical steps for embedding microcredentials within existing quality assurance systems, aligning them with national qualifications frameworks, and establishing shared criteria for credit value, stackability, portability, and institutional recognition.

This section explores how PoMiSA countries are addressing these challenges, drawing attention to both innovative practices and structural policy gaps. It highlights the evolving roles of national agencies, sectoral bodies, and regional frameworks in establishing scalable, inclusive policy systems that support workforce development, lifelong learning, and cross-border recognition.

3.1 Managing quality assurance for microcredential

> ***Quality assurance is central to building trust in microcredentials—ensuring they are credible, transferable, and aligned with both institutional standards and broader policy frameworks.***

Effective systems must balance academic integrity, labour market relevance, and responsiveness to learner needs. Quality assurance typically involves:

- **Internal quality assurance (IQA):** Institutions apply existing academic governance structures to design and evaluate microcredentials, aligning them with institutional and national learning standards.
- **External quality assurance (EQA):** National bodies oversee compliance with qualifications frameworks and sector-wide criteria, supporting consistency, portability, and recognition.

The seven PoMiSA countries reflect a spectrum of policy development and institutional readiness. Some are embedding microcredentials within established quality assurance systems, while others are designing new frameworks with dedicated standards for workload, assessment, and certification. This section reviews how quality assurance is currently managed in each country, highlighting key enablers, constraints, and cross-regional insights.

Lesotho

In Lesotho, quality assurance for microcredentials falls under the existing mechanisms of the Lesotho Qualifications Framework (LQF) and is currently overseen by the CHE (as the Lesotho Qualifications and Quality Council (LQQC) has not yet been established). The CHE, legally mandated under the Higher Education Act, regulates institutional programmes, staffing, and governance. Both

internal and external quality assurance mechanisms are well established and considered suitable for microcredentials. However, coordination and shared understanding between quality assurance actors will be essential to ensure consistent standards and workforce relevance as microcredentials are developed.

Mauritius

Mauritius has adopted a comprehensive and evolving quality assurance framework for microcredentials, integrating both internal and external mechanisms. IQA is implemented at institutional level across HEIs and TVETs, aligning with national and international standards, and supported by continuous feedback through tracer studies and employer surveys. EQA is overseen by the Mauritius Qualifications Authority (MQA), in collaboration with the Higher Education Commission (HEC), with emerging national guidelines ensuring consistency, industry relevance, and digital delivery quality. Stakeholder collaboration—through a national steering group and industry co-design—plays a key role in aligning microcredentials with labour market needs. Mauritius has established specific quality assurance guidelines for online and blended learning, ensuring that digital delivery methods adhere to robust pedagogical and assessment standards.

Namibia

Namibia is yet to create a formal national quality assurance framework for microcredentials. Survey data collected by the Namibian author team indicate that nearly half of stakeholders confirm that no QA system exists, with others pointing to informal practices or limited institutional-level mechanisms. While some respondents referenced the Namibian Qualifications Framework (NQF), this was clarified during stakeholder meetings as not yet accommodating microcredentials directly. Stakeholders emphasised the importance of establishing accreditation, assessment, and evaluation mechanisms, and proposed leveraging the Namibian Qualification Framework with support from key regulatory bodies such as the Namibia Qualifications Authority (NQA), the National Council for Higher Education (NCHE), and the Namibia Training Authority (NTA). One proposal involved creating a separate, possibly commercial, entity to manage microcredential quality assurance. Coordinated development of standards and oversight will be essential for building trust and consistency across providers.

South Africa

South Africa is yet to develop a dedicated national policy for microcredentials, but its quality assurance landscape—anchored by Umalusi, the CHE, and the Quality Council for Trades and Occupations (QCTO)—provides a strong foundation. These bodies regulate quality at different NQF levels and accredit programmes rather than institutions, enabling some flexibility in provision. HEIs offer SLPs and the QCTO oversees skills programmes that are already modularised and responsive to labour market needs. However, microcredentials are not yet systematically aligned with NQF levels, and non-formal short courses often fall outside formal quality assurance frameworks. Key stakeholders, including DHET, SAQA, and the QCs, are exploring policy models that balance agility with consistent standards. Articulation into qualifications and alignment across the PSET sector remain priorities for future development.

Estonia

Proposed amendments to the Adult Education Act (Kultuurikomisjon, 2024) will establish national quality assurance requirements for microcredentials, including licensing criteria, programme volume (5–30 ECTS), and alignment with labour market needs. The Estonian Education and Youth Board (HARNO) will

manage provider assessments and licensing, ensuring institutional compliance with national and industry standards. These measures are part of Estonia's broader Education Strategy 2021–2035, which supports modular, lifelong learning and aligns with the European Skills Agenda and EU microcredential recommendations and are designed to enhance the credibility of microcredentials and reinforce their alignment with labour market needs.

Belgium/Flanders

In Belgium/Flanders, maintaining quality is viewed as essential, but stakeholders emphasise preserving the flexibility of microcredentials. The Flemish Education Council advocates embedding microcredentials within existing institutional quality assurance processes rather than creating additional regulatory layers. Internal QA follows the European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG), while external QA is conducted through mandatory institutional reviews. Institutions like Ghent University apply fit-for-purpose QA processes, including clear approval procedures, learner feedback, and external input from industry, tailored to different types of lifelong learning. While further regulation is not seen as urgent, legal anchoring of microcredentials and broader coverage across education and training remains under discussion.

Ireland

Ireland has a robust national quality assurance and accreditation framework, overseen by QQI. Microcredentials are subject to the same quality standards as full qualifications, ensuring alignment in learning outcomes, assessment, and certification. Microcredentials are typically aligned with National Framework of Qualifications (NFQ) Levels 6 to 10 and may earn 1–30 ECTS. When designed to stack towards larger qualifications, they follow established pathways under special-purpose or minor award categories. Further and higher education institutions use this framework to ensure that microcredentials meet labour market needs while maintaining consistency with national standards. QQI's oversight supports quality, portability, and international recognition, reinforcing trust among learners and employers.

3.1.1 Cross-regional insights: Strengthening quality assurance for microcredentials

Comparative analysis reveals shared challenges and emerging practices in ensuring the quality, credibility, and portability of microcredentials. Key insights include the following.

1. Leverage existing systems but adapt them for microcredentials: Countries with established QA frameworks (e.g., Ireland, Estonia, Belgium/Flanders) are embedding microcredentials within existing processes, while others (e.g., Mauritius, Lesotho, South Africa) are extending or adapting frameworks to suit shorter, flexible learning formats. QA systems must be responsive to shorter learning durations, alternative providers, and non-traditional learners.

2. Internal and external QA must align: Coherence between institutional QA and national oversight is essential for credibility and recognition. Mauritius offers a strong example of alignment between internal and external processes, supporting both consistency and portability.

3. Flexibility is essential: Over-regulation risks constraining innovation. Belgium/Flanders illustrates how institutional autonomy, and subsidiarity can support fit-for-purpose QA without duplicating effort. Balancing rigour with responsiveness remains a system-wide challenge.

4. Clarity on outcomes and stackability is required: Well-defined, credit-aligned learning outcomes are key to embedding

microcredentials within lifelong learning systems. European countries are aligning ECTS-based microcredentials with national frameworks; Southern African countries are still defining credit values, typologies, and assessment standards.

5. Industry input strengthens credibility: Where employers contribute to design and validation (e.g., Ireland, Mauritius), microcredentials gain trust and relevance. However, few systems have formalised industry roles in ongoing quality assurance. This represents an opportunity to integrate workplace relevance into credential design and validation processes.

6. Digital validation is under development: The need for portable, transparent digital validation is growing. Countries are piloting open badge standards and blockchain-based systems, but large-scale implementation remains limited. A regional approach to infrastructure and interoperability could accelerate progress.

3.2 Institutional standards for microcredentials

Institutional standards define how HEIs, vocational training providers, and other education and training bodies design, assess, and assure the quality of microcredentials. These standards are essential for aligning microcredentials with broader institutional learning frameworks and national qualifications systems. While some PoMiSA countries demonstrate established internal processes, others are in the early stages of developing institutional governance for microcredentials.

3.2.1 Comparative approaches

- Lesotho and Namibia are at earlier stages. Some Lesotho institutions are using existing quality assurance systems under the LQF, but gaps in national guidance led to inconsistency. In Namibia, stakeholder consultations reveal low institutional awareness and minimal policy development, with limited capacity to formalise internal processes.
- In Mauritius, internal QA processes are being implemented by both HEIs and TVET providers, though approaches are still somewhat fragmented while they develop a fully established national framework. Survey data show a growing trend toward adoption, particularly in institutions with stronger links to industry needs.
- South Africa presents a hybrid model. While many institutions offer SLPs with features similar to microcredentials, there is no overarching framework for their recognition or integration. Debates continue about whether these offerings should be integrated into existing quality assurance mechanisms or treated as distinct categories requiring separate standards.
- In Estonia and Ireland, institutional guidelines for planning, assessment, and quality assurance are embedded within broader academic governance systems and aligned with relevant national qualification frameworks. Ireland's institutions work under the QQI framework, ensuring credit recognition and robust quality assurance.
- Belgium/Flanders, while still formalising its national approach, has engaged universities in co-developing a microcredential framework. Though currently non-binding, this initiative promotes transparency and prepares the ground for more integrated policy development.

Table 3-1 provides a summary of the state of play of institutional approaches to microcredential standards.

Table 3-1: Institutional approaches to microcredential standards

Country	Institutional standards for microcredentials	Level of institutional autonomy	National/External alignment
Lesotho	Emerging internal QA; lacks formal national guidance	Moderate	Partial alignment with LQF
Mauritius	Significant uptake across HEIs and TVETs; partial alignment with QA systems	High	Aligned with MQA and HEC QA expectations
Namibia	Low awareness; few draft policies in circulation	Low	No current alignment
South Africa	SLPs offered with potential for recognition; regulatory ambiguity remains	High	Unclear alignment; SLPs outside current NQF scope
Estonia	Internal guidelines embedded in QA systems; not yet nationally standardised	High	Internal QA aligned with EU principles
Belgium/ Flanders	Framework co-developed by HEIs; not legally anchored	Moderate	Aligned with FQF and EQF
Ireland	Standards aligned with QQI and NFQ; microcredentials recognised as credit-bearing	Moderate	Mapped to NFQ and QQI QA standards

3.2.2 Insights and implications

This analysis reveals several important insights for policymakers and institutional leaders:

- **Institutional autonomy enables agility—but needs coordination.** Countries like Estonia, Ireland, and South Africa show how institutions can proactively develop microcredential offerings. However, without clear national coordination, this autonomy may lead to fragmentation in quality, recognition, and learner mobility. Strong institutional leadership must be balanced with national coherence.
- **Embedding microcredentials within existing QA systems reduces duplication.** In contexts where microcredentials are integrated into established institutional quality assurance processes (e.g., Estonia, Ireland), implementation is smoother and more credible. This suggests that adaptation—not reinvention—of institutional QA systems may be the most effective path forward.
- **Policy vacuum slows institutional alignment.** In countries like Namibia and Lesotho, weak or absent national frameworks hinder the development of institutional standards. Institutions in these contexts may lack the guidance and legitimacy needed to confidently design and deliver microcredentials, delaying innovation and adoption.
- **TVET and HEIs must be supported equally.** Mauritius illustrates the need for shared institutional standards across both higher education and vocational training sectors. Without parallel capacity building, gaps may widen between sectors, limiting the equity and scalability of microcredential ecosystems.
- **Systemic alignment enhances portability.** Where institutions are aligning offerings with national and regional frameworks (e.g., NFQ, EQF),

microcredentials are more likely to gain recognition and support stackability. Strengthening these linkages will be key to ensuring that microcredentials contribute meaningfully to lifelong learning systems.

These insights underscore the value of a coordinated yet flexible approach—where institutions are empowered to innovate but supported through shared frameworks, consistent quality standards, and mechanisms for cross-sector collaboration.

3.3 National standards, regional and cross-border recognition

National policy frameworks play a critical role in legitimising microcredentials, supporting alignment with qualifications systems, and enabling learner and workforce mobility. While institutional engagement is vital, national standards provide the structural coherence needed for credit portability, stackability, and employer recognition.

National frameworks: Diverse pathways to integration

PoMiSA countries exhibit varied progress in embedding microcredentials into their national systems:

- **Namibia** remains at an exploratory stage, with draft frameworks and limited institutional alignment. Stakeholder consultations have identified a need for national coordination, quality assurance standards, and role clarity across regulatory bodies.
- **South Africa** and **Lesotho** have foundational mechanisms—such as RPL and CAT—that could support microcredentials. However, specific policy instruments for microcredential governance are still in development.
- **Mauritius** is advancing a national framework through the NCVTS, aligning microcredentials with the qualifications framework and enabling cross-sector uptake. Though still evolving, the NCVTS anchors microcredentials in national policy.
- **Belgium/Flanders** is progressing toward formal integration, with microcredentials aligned to EQF Levels 6–7 and situated within higher education. A policy note in 2024 indicates momentum, though full legislative anchoring is still pending.
- **Ireland** and **Estonia** have developed integrated frameworks. Ireland's microcredentials are formally credit-bearing within the National Framework of Qualifications (NFQ), supporting stacking and employer recognition. Estonia embeds microcredentials through RPL mechanisms and is refining its legislative and qualifications systems to support modular learning under the Education Strategy 2021–2035.

Regional and cross-border recognition: Uneven but evolving

- In **Southern Africa**, countries such as Lesotho, Namibia, and South Africa are engaging with the SADCQF, which provides a basis for regional cooperation. Mauritius has also emphasised the need for a regional recognition mechanism to support shared credential standards and cross-border mobility.
- **Europe** currently demonstrates an advantage of regional coherence. Ireland and Belgium/Flanders benefit from alignment with the EQF, the Bologna Process, and Europass. These structures enhance trust, portability, and employer recognition across borders.

Recognition of microcredentials is still uneven but evolving. While aspirations for regional coherence are clear, operational frameworks are still emerging. **Table 3-2** summarises both the state of play of national and cross-border recognition of microcredentials across PoMiSA countries.

Table 3-2: National standards and cross-border recognition of microcredentials

Country	National framework for microcredentials	Regional and cross-border recognition
Lesotho	No formal policy; linked to RPL/CAT/RCC	Aspiring alignment with SADCQF
Mauritius	Incorporated via NCVTS with alignment to NQF	Advocates regional recognition through SADC alignment
Namibia	No clear policy direction yet; draft discussions underway	Limited progress on regional frameworks
South Africa	Integrated into Adult Education Act and lifelong learning strategy	Initial discussions on SADC alignment
Estonia	Integrated into Adult Education Act and lifelong learning strategy	Aligned with EU frameworks and Bologna Process
Belgium/ Flanders	Linked to FQF and Bologna Process; still under development	Recognised through EQF; supports learner mobility
Ireland	Fully embedded in NFQ; credit-bearing and stackable	Supports cross-border recognition via EQF and Europass

3.3.1 Insights and implications

- **Policy clarity drives system coherence.** Where microcredentials are embedded in national qualifications frameworks (e.g., Ireland, Estonia), they gain legitimacy, are credit-bearing, and support learner mobility. In contrast, countries without formal recognition mechanisms face fragmentation and limited uptake.
- **Regional alignment enhances trust.** European countries benefit from shared regional tools and mutual recognition frameworks. For Southern Africa, the SADCQF offers a strategic opportunity—but further work is needed to translate regional alignment into operational practice.
- **Recognising microcredentials in national legislation matters.** Countries like Mauritius and Estonia demonstrate that embedding microcredentials in national strategies strengthens stakeholder coordination and quality assurance.
- **Credit systems must evolve.** Lack of clarity around workload, credit values, and stackability continues to challenge uptake and employer recognition. Harmonising credit metrics is essential for meaningful learner progression.
- **Cross-border recognition depends on trust and shared criteria.** Common workload definitions, transparent assessment standards, and digital verification systems are all necessary building blocks for portability across borders.

3.4 Policy levers for scalable microcredential ecosystems

The development of robust, scalable microcredential systems requires more than isolated reforms—it calls for a coordinated policy ecosystem that balances national priorities, institutional capacity, labour market needs, and regional cooperation.

Across the PoMiSA countries, common enablers and systemic challenges have emerged, many of which converge around a core set of interdependent policy levers.

The diagram presented in Figure 3-1 synthesises these eight critical policy levers—distilled from country practices, stakeholder insights, and international frameworks—into a **policy development wheel**. At the centre is the shared goal: Microcredentials that are **trusted, credible, portable, and inclusive**, grounded in **purpose and context**. Each spoke of the wheel highlights a domain where policy action levers can support integration, recognition, and impact.

These **eight policy levers** in Figure 3-1 offer an actionable roadmap for countries at different stages of development to build credible, inclusive, and portable microcredential ecosystems from a policy perspective. The high-level detail of each lever is detailed next.

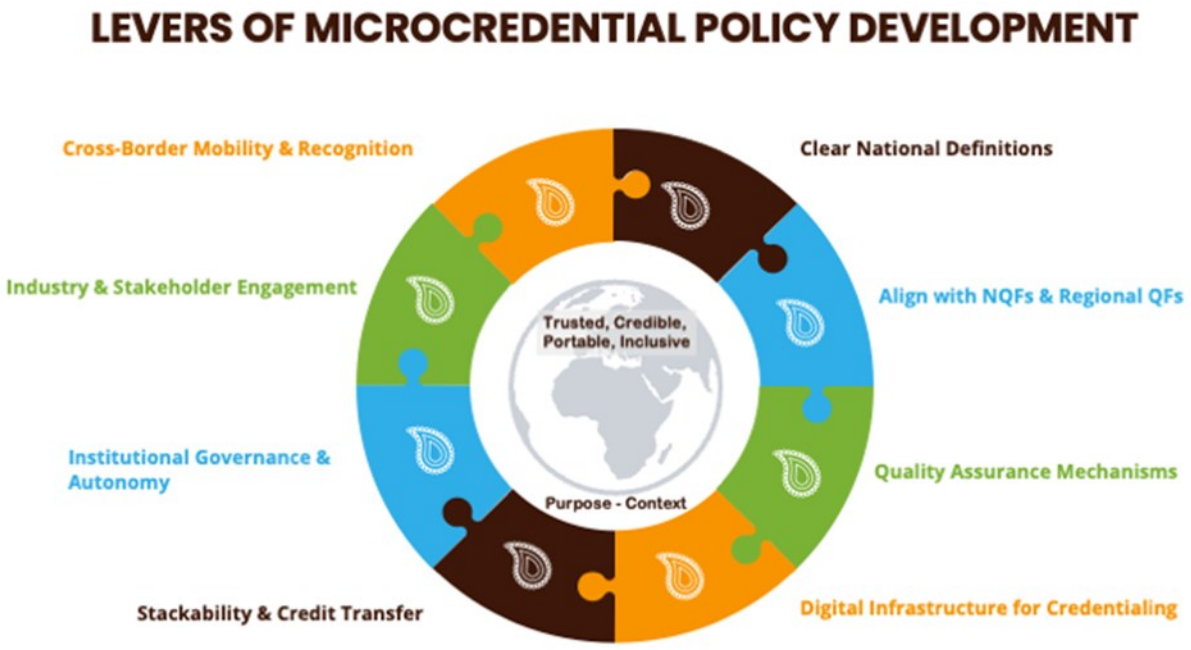


Figure 3-1: Eight levers of microcredential policy development

3.4.1 Clear national definitions and scope

- Adopt working definitions that distinguish microcredentials from traditional qualifications while aligning with national and regional goals.
- Establish criteria for credit value, duration, learning outcomes, and types of providers.

A fundamental step in microcredential policy development is defining the purpose, structure, and alignment of microcredentials with national education systems and labour market needs. Clarity on credit values, duration, and learning outcomes is essential for ensuring their recognition and integration.

3.4.2 Alignment with national and regional qualifications frameworks

- Embed microcredentials within existing NQFs to ensure credibility and facilitate recognition.
- Align national approaches with the SADCQF or EQF to support mobility.

The integration of microcredentials within NQFs is a clear priority. Regional alignment helps to facilitate the acceptance and portability of microcredentials across borders, supporting workforce mobility.

3.4.3 Quality assurance systems

- Extend internal and external QA frameworks to accommodate microcredentials.
- Ensure QA processes are proportionate and flexible to maintain responsiveness and innovation.

The credibility and recognition of microcredentials depend on rigorous quality assurance mechanisms. Efforts to align microcredentials with broader education and training policies, ensure their credibility within national and regional qualifications frameworks.

3.4.4 Digital infrastructure for credentialing

- Invest in secure, interoperable systems for digital badges and credential verification.
- Link microcredentials to broader qualification records (e.g., Europass).

Digital tracking and verification systems are critical to ensuring microcredentials are portable, transparent, and trusted by employers and educational institutions. Global standards and rapidly emerging technologies aim to enhance skill and knowledge transparency and facilitate seamless transitions between education and employment sectors.

3.4.5 Stackability and credit transfer

- Enable microcredentials to contribute towards full qualifications via clear pathways.
- Integrate RPL and CAT systems.

One of the primary policy challenges is ensuring that microcredentials are portable, stackable, and transferable across institutions, industries, and borders. In doing so, learners achieve better recognition of what they know and can do.

3.4.6 Stakeholder and employer engagement

- Formalise employer roles in design, validation, and recognition processes.
- Create national or regional dialogue forums to support shared ownership of microcredential policy.

The successful implementation of microcredentials requires active engagement from government agencies, education providers, industry representatives, and regulatory bodies. Dialogue and opportunities for co-design and development can also raise the awareness, relevancy, and recognition of microcredentials

3.4.7 Institutional governance and autonomy

- Encourage HEIs and TVET providers to establish internal policies aligned with national frameworks.
- Support institutional capacity-building and foster innovation in credential design.

Institutions play a pivotal role in shaping microcredential ecosystems. Encouraging autonomy while ensuring alignment with national frameworks helps foster both innovation and consistency. Building institutional capacity—including staff development, curriculum design support, and policy literacy—is essential to ensure high-quality, learner-centred microcredential offerings.

3.4.8 Cross-border mobility and recognition

- Develop bilateral or regional recognition agreements.
- Harmonise standards and policy instruments to support regional workforce mobility.

Portability of microcredentials across borders remains a key enabler of workforce mobility and lifelong learning. Regional harmonisation efforts—such as alignment with the SADCQF or EQF—are crucial for facilitating mutual recognition. Governments and institutions must collaborate to establish cross-border agreements and shared quality benchmarks to support learners in increasingly mobile and interconnected labour markets.

These eight policy domains offer concrete guidance for policymakers, institutions, and regional bodies. Countries participating in the PoMiSA project are already engaging with these policy levers in varied ways. Some have advanced their quality assurance, integrating national frameworks and digital infrastructure goals. Others are piloting internal governance or focusing on cross-border alignment. The wheel offers a practical guide for reflecting upon and coordinating policy development and can be adapted to national context and different levels of system maturity. Pilot projects, where frameworks are tested, and evaluation and feedback loops are utilised, can serve as an excellent foundation for scaling microcredential systems within national education and training structures.

3.5 Section 3: Insights and recommendations

3.5.1 Section 3: Key insights

Building on the prior comparative insights foregrounded in this section, analysis across PoMiSA countries reveals shared ambitions for developing microcredentials as a recognised and flexible part of national and regional qualifications ecosystems. Despite different stages of policy maturity, three core patterns emerge:

KEY INSIGHTS

1

Existing systems can be leveraged but must be adapted.
Countries with robust qualifications frameworks and quality assurance structures (e.g., Ireland, Estonia, Mauritius) are building on these to integrate microcredentials. Others are innovating from less structured starting points.

2 **Coherence and coordination are essential.**
Aligning internal institutional processes with external national standards—and ensuring both are fit for microcredentials—is key to building trust and ensuring uptake across sectors.

3 **Flexibility must be preserved.**
Microcredentials thrive when policy frameworks support responsiveness, employer engagement, and learner mobility. Overly rigid systems may hinder innovation and uptake.

3.5.2 Section 3: Key recommendations

KEY RECOMMENDATIONS

1 **Standardisation and alignment**
This entails the development of clear guidelines and frameworks that align institutional processes with national standards for microcredentials. Regular reviews and updates would be required to ensure that institutional practices remain consistent with evolving national policies and standards.

2 **Cross-sector collaboration**
Establish partnerships between educational institutions, industry stakeholders, and government bodies to co-create and validate microcredential programmes. These can be achieved through joint workshops, forums, and advisory committees to facilitate ongoing dialogue and collaboration among all relevant parties.

3 **Capacity building**
Providing training and allocating resources to institutions are essential to help them understand and implement national standards for microcredentials. Additionally, supporting the development of institutional capacity through professional development and infrastructure investment is necessary to ensure the creation and integration of high-quality microcredential offerings.

4 **Communication and transparency**
Raising awareness of microcredentials through inclusive and transparent communication about microcredentials and its alignment with national standards will build trust among learners, employers, and other stakeholders. This can be achieved through the publication of case studies and success stories on the value and impact of microcredential programmes.

SECTION 4

PUBLIC & PRIVATE SECTOR MICROCREDENTIAL PROVIDERS

4 PUBLIC & PRIVATE SECTOR MICROCREDENTIAL PROVIDERS

Considering the contextual, conceptual, and policy foundations established so far, Section 4 examines the roles of public and private sector actors in shaping microcredential ecosystems. As countries clarify the purpose and scope of microcredentials and develop supportive policy frameworks, diverse institutional responses are emerging from public and private sectors such as HEIs, TVET providers, industry bodies, NGOs, and commercial training providers. By navigating varied regulatory environments, forming strategic partnerships, and responding directly to learner and employer needs within formal, non-formal, and informal learning settings, these providers can contribute to the microcredential ecosystem. A diversity of providers can bring opportunities and challenges in system responsiveness, quality assurance, and equitable access, thereby setting the stage for Section 5, which offers criteria to guide microcredential implementation.

4.1 Role of public and private sector microcredential providers

Microcredential provision across PoMiSA countries reflects the dynamic interplay between public sector leadership, private innovation, and national policy maturity. In Southern Africa, ecosystems are still emerging, with varied levels of public and private sector engagement shaped by institutional readiness, regulatory development, and socio-economic priorities. In contrast, European countries such as Estonia, Belgium/Flanders, and Ireland benefit from more established frameworks, where public higher education institutions play a central role, complemented by industry and private sector actors. Across both contexts, the evolving role of providers reveals key opportunities for alignment, diversification, and collaboration.

4.1.1 Southern African contexts

In Southern Africa, provider landscapes vary considerably with nascent or fragmented provision and limited regulatory guidance.

Provision of microcredentials in **Lesotho** remains limited but diverse. Most HEIs and private institutions remain focused on traditional longer-term qualifications, with only a few offering microcredentials. Provision is most visible in continuous professional training and skills-based programmes—often linked to national priorities such as green energy and improved agricultural practices. Regulatory bodies for some professions, particularly in the health professions, are increasingly attentive to what skills are acquired from academic programmes. Major stakeholders that need to play a role in microcredentials in Lesotho are broadly identified as providers, regulatory bodies, and industry.

Mauritius is developing a broader, multi-actor ecosystem. Public HEIs like the University of Mauritius and University of Technology Mauritius collaborate with international platforms like Coursera to offer credit-bearing online learning that can stack into formal qualifications. The Mauritius Institute of Training and Development (MITD) and Polytechnics Mauritius offer technical and vocational microcredentials including hospitality, ICT, and engineering. Industry engagement is growing, with employers such as the Mauritius Ports Authority and Ceridian Mauritius co-delivering microcredentials. However, TVET providers are less motivated to collaborate and co-deliver with industry partners. Professional associations like the Mauritius Institute of Directors and Mauritius

Institute of Professional Accountants are also delivering sector-specific upskilling.

Namibia presents a provider landscape led predominantly by private institutions responsive to specific industry demands in tourism, ICT, and renewable energy. Over 60% of survey respondents perceive private providers as playing a moderate to significant role in provision, whereas public institutions are seen as less involved. While the private sector's agility and industry alignment are valued, concerns remain about affordability and access. Additionally, the limited role of the public sector may be attributed to a dominant perception of education in traditional terms and a limited awareness of microcredentials. Stakeholders highlighted the need for broader public-sector engagement to ensure national development priorities are reflected in provision.

South Africa presents a wide-ranging microcredential landscape involving both public and private provision (see **Table 4-1**). Public institutions such as the NWU have developed institutional microcredential frameworks, whereas private providers deliver specialised industry-oriented credentials. Providers including Boston College, Chartall Business College, and STADIO illustrate this diversity, catering to a broad spectrum of learners seeking occupational entry, upskilling, and professional recognition.

Table 4-1: Providers offering microcredentials in South Africa (ACQF II survey report, 2024)

Institution type	Included (√) / Not Included (X)
Schools	X
Vocational education and training	√
Higher education	√
Adult education and training	√
Public employment services	√
Companies	√
Professional bodies	√
Trade unions	X
Employers organisations	√
Online learning platforms	√
Other	√

4.1.2 European contexts

In European PoMiSA countries, public HEIs typically play central roles in microcredential provision, supported by established quality assurance systems and alignment with regional frameworks such as the EQF. Private training organisations, employers, and industry bodies

increasingly complement this provision, particularly addressing demands for flexible, stackable, and workforce-relevant learning.

In **Estonia**, public HEIs dominate microcredential provision due to regulatory frameworks that ensure quality but limit provider diversity. Providers must obtain government-issued licenses and undergo external evaluations to ensure academic quality and institutional credibility. Current provider restrictions have led to proposed amendments to broaden access to include non-HEI educational institutions (including private providers) potentially expanding diversity, flexibility, and responsiveness to evolving labour market needs.

In **Belgium/Flanders**, microcredential provision encompasses a wide array of providers beyond HEIs, including employers, civil society organisations, social partners, public employment services, and government agencies. Providers must meet the European definition and standard elements supported by existing legislation. Additionally, the EU Council supports the expansion of microcredentials for diverse learning contexts—formal, non-formal, and informal—reflecting Belgium/Flanders' collaborative and cross-sectoral strategy for workforce development, lifelong learning, and social inclusion.

Ireland has a multi-tiered microcredential ecosystem driven primarily by public universities and technological institutions via initiatives such as MicroCreds.ie and the Human Capital Initiative. Microcredentials are quality-assured by QQI and integrated into the NFQ. FET providers, guided by the State agency SOLAS, offer short, accredited courses addressing key skill needs. Private providers, including Griffith College and Skillnet Ireland-supported enterprises, deliver flexible, industry-aligned training. Online platforms like Coursera add flexibility, though typically without formal national accreditation.

4.1.3 Cross-regional insights: Public and private sector providers

The role of public and private providers is shaped by the degree of regulatory development, the responsiveness of institutions, and the strength of partnerships across sectors. Key comparative insights include the following.

- **Public sector leadership** is strongest in contexts with established national frameworks, funding mechanisms, and quality assurance systems. In emerging systems, engagement is growing but often constrained by lack of institutional mandates or enabling policies.
- **Private and industry actors** tend to have a role in more flexible or market-driven environments, particularly where public institutions have not yet established a strong presence in microcredential provision. Their involvement supports innovation and labour market alignment, though formal recognition varies.
- **Effective ecosystems** require coordination across sectors, including regulatory clarity, opportunities for co-delivery, and alignment with qualifications frameworks. As provision expands, partnerships between HEIs, TVETs, private providers, and employers will be critical to ensuring relevance, equity, and quality.

4.2 Benefits for microcredential providers and users

The benefits of microcredentials for learners, employers, and institutions are context-dependent, shaped by the maturity of national frameworks, institutional readiness, and alignment with labour market needs. In countries with more established microcredential ecosystems, tangible benefits are already being realised. In others, these benefits are largely aspirational, identified through consultations and pilot initiatives.

- ***Across PoMiSA countries, stakeholders are optimistic about the potential of microcredentials to address skill gaps, promote lifelong learning, and offer more flexible, modular alternatives to traditional qualifications.***

4.2.1 Southern African contexts

Lesotho

Stakeholders in Lesotho identified microcredentials as a promising vehicle for modernising learning, particularly in response to evolving workforce demands. Microcredentials were seen as offering:

- **Targeted, flexible skills development**, catering to professionals seeking continuous learning without the time commitment of long-form qualifications.
- **Opportunities to address niche industry needs**, offering technical and entrepreneurial skills that are underrepresented in traditional curricula.
- **Increased access to upskilling and reskilling**, training working adults and those with partial qualifications, through modular formats and shorter time commitments.
- **Support for lifelong learning**, bridging non-formal learning into formal recognition pathways over time.

However, stakeholders also noted that these benefits remain largely aspirational unless supported by enabling systems.

Mauritius

Mauritius presents an evolving microcredential ecosystem shaped by strong collaboration between HEIs, vocational training providers, and industry stakeholders. Microcredentials are seen as a strategic response to workforce development needs, offering targeted, flexible, and industry-aligned training for entry-level and in-service learners.

Key perceived and actual benefits include:

- **Workforce relevance and employability**: Addressing practical skills gaps in priority sectors such as ICT, hospitality, maritime, and procurement. Collaborations with employers ensuring alignment with job-specific competencies and industry standards.
- **Pathways to formal qualifications**: Enabling microcredentials to be stacked towards full qualifications.
- **Support for lifelong learning and access**: RPL and accreditation of prior learning (APL) policies offer alternative entry routes for mature learners and working professionals, increasing participation and enabling formal recognition of workplace skills.
- **Increased flexibility and responsiveness**: Offering modular delivery modes, online learning partnerships, and short-duration formats support upskilling without disrupting employment—particularly for working adults.
- **Strengthening institutional innovation**: Fostering new forms of HEI-industry collaboration and curricular innovation across HE and TVET sectors, laying the groundwork for more agile, demand-responsive education models.

While uptake is growing, further clarity in national policy frameworks will help consolidate these benefits and expand co-delivery across the TVET sector, where engagement has been less consistent.

Namibia

In Namibia, microcredentials are increasingly seen as a promising tool for addressing workforce development needs, particularly through private sector engagement. Survey and workshop participants highlighted a range of anticipated benefits.

Key perceived and actual benefits include:

- **Career advancement and skills development**: enabling users to gain specific, job-relevant skills that enhance employability and advancement, especially in sectors such as ICT and renewable energy.
- **Flexible, cost-effective alternatives**: offering alternatives to working adults and those seeking to avoid the time and cost burdens of traditional qualifications.
- **Support for industry-aligned training**: verifying competencies and responding to shifting labour market needs.
- **Curricular innovation for education providers**: diversifying offerings and fostering more inclusive access to lifelong learning.

Despite these perceived benefits, concerns remain around industry recognition, with less than half of respondents (47%) confident that employers would fully recognise microcredentials—limiting their practical value in the job market and incentives for public institutions to scale provision.

South Africa

South Africa presents a dynamic yet fragmented microcredential landscape, with activity spanning HE, TVET, private colleges, industry-linked providers, and corporate skills development initiatives. Although not all offerings are formally labelled as microcredentials, many align with their defining features—short, targeted, modular, and industry-responsive. Stakeholder insights reveal several key benefits of microcredentials across user groups:

- **Expanded access to skills development**: enabling unemployed youth, early-career professionals, and workers in transition to access short, targeted learning linked to employment outcomes.
- **Workforce readiness and agility**: leveraging microcredentials for internal upskilling, agile learning, and sector-specific competencies.
- **Recognition of informal and alternative learning pathways**: integrating digital badges and modular 'stripes' into SLPs, signalling a shift toward recognising practical skills, workplace behaviour, and transversal competencies.
- **Industry-responsive innovation**: growing customisation of provision to meet evolving skills needs—particularly in sectors affected by rapid technological and regulatory change.

However, the absence of national coordination, a provider register, or a formal recognition framework weakens trust and consistency. Without standardised criteria, there is significant variation in quality, cost, and recognition—limiting microcredentials' potential to act as a bridge into formal qualifications or sustainable employment.

4.2.2 European contexts

Estonia

In Estonia, microcredentials are seen as a key mechanism for supporting lifelong learning, career progression, and agile responses to workforce needs. Although provision is currently limited to accredited HEIs, planned legislative changes are expected to broaden access through regulated private providers. These shifts aim to enhance both the flexibility and relevance of microcredentials for learners across sectors. Perceived and emerging benefits for users include:

- **Career progression and professional development**, enabling working adults seeking to upgrade specific competencies without undertaking full degrees.
- **Increased access to flexible, modular learning**, enabling learners to upskill or reskill around employment or family commitments.

- **RPL**, allowing learners to convert existing skills and experience into formal learning outcomes.
- **Improved alignment with labour market needs**, offering short-form, targeted credentials developed in collaboration with employers and national innovation strategies.
- **Greater diversity of offerings expected**, allowing non-HEI providers to enter the space, expanding opportunities for different learner groups.

These benefits are framed within Estonia's broader commitment to a digital, future-oriented education system that promotes equity, innovation, and lifelong learning.

Belgium/Flanders

In Belgium/Flanders, microcredentials are promoted as part of a broader European strategy to make education more inclusive, flexible, and responsive to changing societal and economic demands. While the system is still evolving, the Flemish approach aligns closely with the Council of the European Union's framing of microcredentials as enablers of mobility, innovation, and lifelong learning. The anticipated and emerging benefits for users include:

- **Expanded access to education and training**, providing access for adults, career changers, and vulnerable groups who may not engage with traditional pathways.
- **Flexible learning options and progression**, enabling users to build qualifications gradually or transition between education levels and sectors.
- **Acquisition of in-demand competencies**, aligning with labour market transitions and EU strategic goals.
- **Support for continuous professional development**, offerings for educators, trainers, and those in knowledge-based professions.
- **Recognition of informal and non-formal learning**, supporting the integration of diverse learning experiences into formal systems.
- **Enhanced employability and career mobility**, offering short, targeted credentials that are portable across institutions and countries.
- **Contribution to social equity**, promoting access across demographic and socio-economic divides.

Belgium/Flanders' integration of microcredentials into broader educational reform efforts signals a commitment to personalised, future-fit learning systems grounded in inclusivity and quality assurance.

Ireland

Ireland has developed a well-structured microcredential ecosystem that offers distinct advantages for learners, employers, and the broader education and training system. Through strong alignment with national qualifications frameworks and collaborative design processes, microcredentials have become an accessible and agile tool for workforce and lifelong learning strategies.

Key benefits for learners include:

- **Flexible and stackable learning,** ensuring learning fits around work and personal commitments, allowing learners to progress incrementally towards full qualifications.
- **Career advancement and reskilling opportunities**, offering recognised pathways into new roles or sectors without requiring prolonged time away from employment.
- **Accreditation and quality assurance**, offering microcredentials developed by leading universities and further education providers and recognised by QQI.
- **Entry points into formal learning**, offering pathways for those who may lack traditional entry qualifications or

confidence to undertake longer programmes.

- **RPL**, enabling learners to validate workplace skills and apply for exemptions or advanced standing in formal programmes.

Benefits for employers include:

- **Agile response to skills gaps**, co-designing microcredentials with industry
- **Enhanced productivity and workforce development**, offering CPD-aligned microcredentials to reduce need for time off work and improve job readiness.
- **Support for recruitment and retention**, contributing to a certified and continuously developing workforce.
- **Cost-effective upskilling**, working through RPL processes that validate existing competencies without requiring traditional training models.
- **Contribution to national economic goals**, including attracting foreign direct investment through demonstrable workforce capability and alignment with national standards.

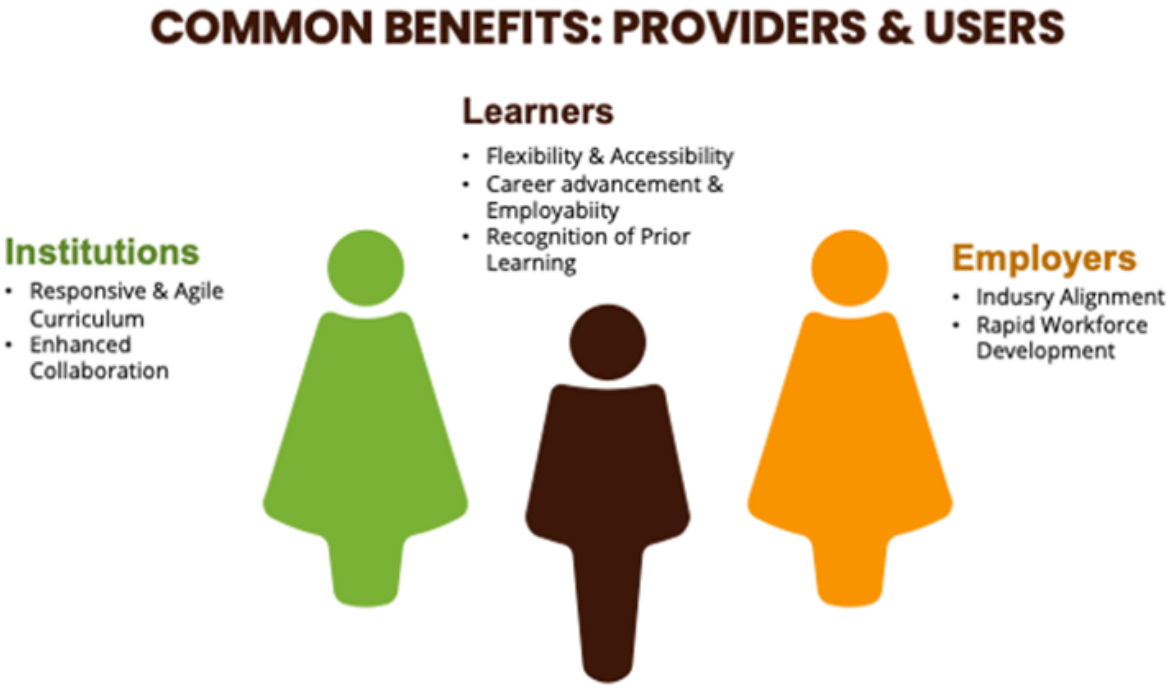
Ireland's national framework is designed to ensure both learner and employer needs are integrated into the design, delivery, and recognition of microcredentials—anchoring them as a credible and strategic component of lifelong learning and labour market adaptability.

Table 4-2: Benefits of microcredentials identified

COUNTRY	Benefits of microcredentials identified
Lesotho	Flexible, demand-driven offerings for CPD; sector-specific upskilling; modular formats; early-stage pathways for lifelong learning.
Mauritius	Workforce relevance; initial training and in-service learning; strong HEI–industry and partnership collaboration; formal pathways and RPL options.
Namibia	Career advancement and flexibility; strong private sector role; addresses sector-specific skills gaps, equitable access.
South Africa	Diversity of offerings across sectors; employer-driven initiatives and specific industry alignment; workforce readiness; supports informal learning recognition and RPL.
Estonia	Flexible upskilling through HEIs; integration of non-formal/informal learning; expansion to private providers; RPL focus.
Belgium/ Flanders	Enables flexible, inclusive learning; EU-aligned quality standards; mobility; complementary education and training.
Ireland	Stackable, accredited learning aligned with NFQ; bridges skills gaps; strong employer engagement and alignment; supports CPD and lifelong learning.

4.2.3 Cross-regional insights: User and provider benefits

Despite different stages of system maturity, PoMiSA countries share a common recognition of the potential benefits of microcredentials for institutions, learners and employers (Figure 4-1).



Institutions	Learners	Employers
• Responsive & Agile Curriculum Quick adaptability to changing labour market requirements. • Enhanced Collaboration Strengthening of educational and industry partnerships	• Flexibility & Accessibility Modular learning, adaptable around employment and personal commitments. • Career Advancement & Employability Targeted skill-building enabling career progression and job mobility. • Recognition of Prior Learning (RPL) Converting informal or workplace experiences into formally recognised credentials.	• Skills Alignment: Targeted upskilling in response to immediate workforce and market needs. • Enhanced Employability: Development of job-ready skills, particularly in key sectors such as digital technologies and sustainability.

Figure 4-1: Common aspirational and tangible benefits for providers and users (Africa and Europe)

4.3 Needs of users across formal, non-formal and informal education sectors

User needs for microcredentials vary significantly across formal, non-formal, and informal education sectors, influenced by differences in educational provision, recognition frameworks, socio-economic contexts, and labour market demands. In the Southern African context, microcredentials are increasingly valued for their capacity to address structural challenges such as youth unemployment, uneven access to education, and sector-specific upskilling needs. However, the design and delivery of these credentials remain uneven across sectors and countries, shaped by differing institutional capacities and policy maturity.

4.3.1 Southern African contexts

In **Lesotho**, microcredentials primarily support regulated professions, emphasising flexible, affordable online delivery for continuous professional development (CPD). They align closely with practical workplace needs in evidence-based sectors (e.g., clinical, renewable energy, agriculture), though access remains limited for informal learners (e.g., rural and marginalised groups).

In **Mauritius**, user needs vary by sector. Formal learners complement degrees or seek industry-aligned credentials in priority fields (e.g., ICT, healthcare, finance). Non-formal learners focus on targeted professional skills (digital marketing, project management), while informal learners have needs around personal enrichment, career advancement and gaining specialised knowledge.

Namibian stakeholders noted distinct sectoral user needs. Formal users valued microcredentials to quickly address market-driven skills, especially for teachers and graduates. Non-formal learners prioritised practical, community-based training supporting adult learning and entrepreneurship. Informal learners favoured rapid skills acquisition for self-employment and personal growth. Flexible delivery, recognition of prior learning, and digital access were highlighted as key enablers.

In **South Africa**, microcredentials are predominantly found in the TVET sector, followed by higher education, adult education, and general education. Formal offerings (HEIs, TVETs, QCTO-accredited programmes) align with structured career pathways, while non-formal and informal learners focus on practical competencies for employment or reskilling. Keevy and Molokwane (2024), drawing from UNESCO and OECD frameworks, distinguished between informal credentials (learner self-attested), non-formal credentials (endorsed by institutions, professional bodies, or employers but not registered on the NQF), and formal credentials (accredited and registered on the NQF), suggesting microcredentials may transition to formal credentials as NQFs evolve. He emphasises the need for strong mechanisms—such as RPL and CAT—to effectively integrate informal and non-formal learning within formal systems.

Across all three sectors in Southern Africa, learners consistently prioritise flexibility, affordability, RPL, industry relevance, and opportunities for career advancement.

- ***However, structural inequalities and limited recognition frameworks constrain access and uptake, particularly in the non-formal and informal sectors.***

4.3.2 European contexts

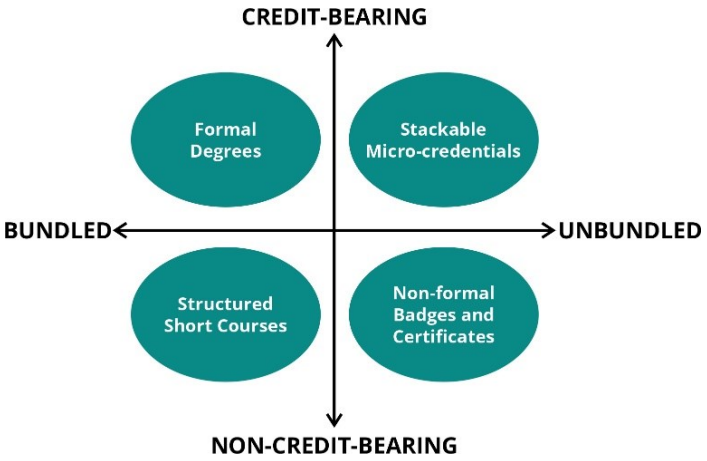
In **Estonia**, although formal user needs have not yet been systematically studied beyond institutional level, national strategy highlights the importance of bridging divides between formal, non-formal, and informal education. The *Education Strategy 2021–2035* prioritises more personalised and flexible learning pathways and encourages recognition of practical competencies. Microcredentials are seen as instrumental to bridge these types of learning into formal pathways through improved assessment systems and RPL.

In **Belgium/Flanders**, the Flemish Education Council (VLOR) affirms that user needs may differ across learning contexts, but the core defining features of microcredentials must remain consistent—particularly in relation to learning outcomes, assessment, and transparency. The Council supports the use of microcredentials in non-formal and informal settings, as long as the standardised European elements are preserved. This approach enables flexibility in delivery while ensuring trust, interoperability, and portability across sectors.

In **Ireland**, microcredentials can address diverse user needs across formal, non-formal, and informal sectors, enhancing employability, lifelong learning, and broader participation. Formal providers deliver NFQ-aligned, flexible credentials for career advancement. Non-formal (FET) offerings, co-designed with employers, focus on accessible, funded training. Informal digital badges and alternative credentials support professional development, often with RPL recognition potential. However, providers indicated that most RPL evidence tends to derive from experiential (informal) learning, rather than non-formal learning. The 'credential ecology' framework (Brown et al., 2020) in Figure 4-2 captures this diversity, distinguishing credential types and learner pathways.

European systems increasingly support user mobility across sectors through aligned frameworks, RPL mechanisms, and funding incentives. This enables a coherent response to varied user needs while maintaining trust and portability of learning.

Figure 4-2: The credential ecology (Brown et al., 2020)



- **Bundled:** the aggregated unit of education provision (degree/qualification)
- **Unbundled:** education provision (degree/qualification) disaggregated into its component parts
- **Credit-bearing:** credit awarded on completion of course, in relation to the course's contribution to a unit standard and/or (part) qualification.
- **Non-credit bearing**: no credit awarded on completion, these credentials are not applicable towards a larger accredited qualification or degree.

4.3.3 Cross-regional insights: Variation in user needs

Microcredential uptake and user needs vary across **formal, non-formal, and informal sectors**, shaped by national strategies, institutional capacities, and labour market dynamics. While Southern African and European countries share an interest in flexibility, career alignment, and lifelong learning, their system maturity and user demands reflect distinct trajectories.

- **Formal education**: In both regions, formal education institutions use microcredentials to enhance curriculum responsiveness, support employability, and widen access.
- **Non-formal education**: There is strong convergence across regions, focusing on immediate skills and community needs.
- **Informal learning**: Significant regional differences in formal recognition. Southern African countries acknowledge informal learning's value yet mostly lack robust quality assurance and integration mechanisms.
- **Equity and access**: Southern Africa emphasises affordability, flexibility, and local relevance (e.g., agriculture, ICT). The European focus is more on mobility, standardisation, and cross-border recognition.
- **Policy and framework alignment**: Southern Africa is at a more formative stage, developing standards and mechanisms like RPL and CAT. Europe shows more advanced integration with national and EU policy frameworks (e.g., NFQs, EQF).

4.4 Section 4: Insights and recommendations

4.4.1 Section 4: Key insights from European partners

Southern African countries can leverage European experiences to shape contextualised microcredential strategies:

KEY INSIGHTS

1. **Strategic policy integration:** Embedding microcredentials within national qualifications frameworks, lifelong learning, and workforce development strategies enhances credibility, funding access, and systemic coherence.
2. **Quality assurance and recognition:** Standardised microcredential elements—workload, learning outcomes, and assessment protocols—promote user trust and cross-border acceptance, offering practical recognition models for Southern Africa
3. **Structured pathways and stackability:** Clearly defined, stackable microcredentials (as in Ireland's NFQ-aligned approach) attract learners and employers by facilitating incremental progression without duplication.

4 **Institution–industry partnerships:** Structured collaboration between institutions and industry (e.g., Ireland, Estonia, Belgium/Flanders) ensures microcredentials directly meet evolving skills needs, providing a model for Southern African employer engagement.

5 **Inclusivity via flexibility and RPL:** Europe's modular, flexible delivery and RPL support diverse learner pathways, offering relevant approaches to improve access and equity in Southern African contexts.

6 **Dedicated funding and infrastructure:** Targeted national investments (e.g., Ireland's MicroCreds.ie and Human Capital Initiative) show the value of clear mandates and supporting infrastructure, highlighting the importance of sustainable funding strategies.

4.4.2 Section 4: Key recommendations

KEY RECOMMENDATIONS

1 **Strengthen public–private collaboration and quality assurance**

- Incentivise co-delivery between HEIs, vocational providers, and industry.
- Ensure all offerings meet national accreditation and quality assurance standards.

2 **Align provision with labour market needs**

- Prioritise microcredentials in high-demand sectors (e.g., ICT, health, green economy, tourism).
- Engage employers in co-design and assessment to ensure relevance and employability outcomes.

3 **Establish national frameworks and progression pathways**

- Develop microcredential standards that align with qualifications frameworks.
- Enable stackable pathways across formal, non-formal, and informal sectors.

4 **Expand access through digital platforms**

- Leverage online and mobile delivery to reach rural and underserved learners.
- Address affordability and infrastructure barriers (e.g., data costs, device access).

5 **Promote inclusive lifelong learning**

- Support reskilling and upskilling at all career stages.
- Target NEETs, informal workers, and other underserved groups through tailored offerings.

6

Support sector-specific and national priorities

- Develop microcredentials that advance economic diversification, industrialisation, and sustainable development.

7

Embed monitoring and feedback systems

- Track learner outcomes, uptake, and employer impact to refine future provision.

SECTION 5

MICROCREDENTIAL IMPLEMENTATION & EFFECTIVENESS

5 MICROCREDENTIAL IMPLEMENTATION & EFFECTIVENESS

The effectiveness of microcredentials hinges on their alignment with educational and workforce systems, accessibility, industry recognition, and sustainability. This section outlines key criteria, based on the main themes of this report, to support the successful implementation of educational, vocational, industry, access, equity, inclusion, and long-term sustainability objectives. Companion practical checklists are offered to support effective implementation across diverse contexts, and particularly for Southern Africa. It should be noted that these checklists are only intended as a guide and catalyst for discussion—they are not all-encompassing.

5.1 Implementation criteria for educational and vocational effectiveness

Standardisation and structural alignment

Southern African countries stress the importance of integrating microcredentials into national education frameworks to enhance credibility, portability, and relevance to national development goals. Namibia and Lesotho prioritise alignment with national NQFs for clear workforce integration. Mauritius integrates microcredentials into its National Skills Development Strategy, reflecting targeted workforce needs. South Africa emphasises clear definitions to ensure coherence across sectors. European experiences, such as Ireland's structured pathways within the NFQ, offer complementary examples of effective alignment and portability.

Labour market alignment

Labour market alignment is fundamental across Southern Africa, with microcredentials explicitly designed to bridge skills gaps in priority sectors like mining, agriculture, tourism, and ICT. Namibia prioritises improved employability and job performance metrics, while Mauritius strategically incorporates microcredentials into national workforce planning. European countries similarly target high-demand sectors, emphasising sector-specific responsiveness and employer collaboration.

Quality assurance and monitoring

Quality assurance mechanisms underpin trust and credibility among learners and employers. South Africa and Lesotho highlight institutional accreditation processes, emphasising employer trust through recognised standards. Mauritius calls for national frameworks to assess microcredential quality comprehensively. European countries, such as Ireland, Belgium/Flanders, and Estonia, demonstrate well-established multi-layered quality assurance frameworks for lifelong learning initiatives such as microcredentials.

Learner-centric outcomes

Southern African countries prioritise microcredentials for enhancing socio-economic mobility and promoting career advancement. Mauritius focuses on flexible, competency-based education tailored to industry demands, while Namibia, Lesotho, and South Africa underline their transformative potential for learner outcomes. Ireland complements this perspective with systematic evaluation of career progression metrics.

Stakeholder engagement

Stakeholder collaboration—including education providers, industry, policymakers, and learners—is critical in Southern Africa for effective implementation. Engagement varies regionally, with active industry co-design in

Mauritius and evolving partnerships in Namibia, South Africa, and Lesotho. Ireland's structured stakeholder collaborations exemplify successful long-term industry engagement, while Belgium/Flanders recognises the need for a balance between standardisation and the diverse needs of learners and stakeholders.

5.1.1 Checklists: Educational and vocational effectiveness

Checklist: Standardisation and structural alignment

- ❑ Develop a clear, nationally accepted definition of microcredentials.
- ❑ Integrate microcredentials within NQFs.
- ❑ Establish consistent guidelines for implementation across institutions.
- ❑ Ensure portability through clear credential registration processes and certification practices across providers, sectors, and borders.

Checklist: Labour market alignment

- ❑ Engage industry partners in microcredential co-design.
- ❑ Identify and prioritise critical sectoral skills gaps.
- ❑ Regularly review and update microcredential offerings to match evolving industry needs.
- ❑ Track employment outcomes to assess impact.

Checklist: Quality assurance and monitoring

- ❑ Establish and refine clear internal and external quality assurance policies and protocols.
- ❑ Conduct regular monitoring, evaluation, and reporting on the quality of microcredential offerings.
- ❑ Engage industry representatives in periodic quality assessments.
- ❑ Work towards regional policy frameworks for microcredentials

Checklist: Learner-centric outcomes

- ❑ Design flexible, learner-focused pathways in response to learner needs.
- ❑ Regularly collect and analyse learner feedback and satisfaction.
- ❑ Evaluate impacts on employment, promotion, and socio-economic mobility.
- ❑ Ensure stackability towards larger qualifications (where relevant).

Checklist: Stakeholder engagement

- ❑ Facilitate regular dialogue between education providers, employers, and policymakers through advisory boards, policy dialogues and needs analysis.
- ❑ Actively involve employers and learners in curriculum design and evaluation.
- ❑ Create platforms for learner input and feedback.
- ❑ Develop strategic stakeholder partnerships for sustainable microcredential delivery.

5.2 Implementation criteria for industry effectiveness

Industry recognition and engagement

For microcredentials to achieve their intended vocational outcomes, industry must explicitly be engaged to help them identify and recognise their value. Active collaboration in Mauritius and selected sectors in South Africa, Namibia, and Lesotho contrasts with limited recognition elsewhere. European examples, offer models of successful industry integration.

Sector-specific relevance and responsiveness

Microcredentials must align directly with sectoral skills demands, swiftly adapting to changes in dynamic industries. Southern African experiences highlight the need to tailor microcredentials to regionally vital sectors like agriculture, mining, tourism, and emerging digital services.

Integration into corporate training systems

Ensuring that microcredentials integrate smoothly into existing corporate training and continuous professional development (CPD) systems is crucial. Successful examples from Ireland and Mauritius demonstrate the effectiveness of structured partnerships, embedding microcredentials in employer-supported training initiatives.

5.2.1 Checklists: Industry effectiveness

Checklist: Industry recognition and engagement

- ❑ Foster employer awareness through targeted outreach and communication.
- ❑ Engage industry stakeholders actively in the co-design and co-delivery of microcredentials.
- ❑ Regularly assess employer feedback and adjust offerings accordingly.
- ❑ Develop structured and mutually productive industry-education partnerships.

Checklist: Sector-specific relevance and responsiveness

- ❑ Conduct regular skills gap analyses in collaboration with industry partners.
- ❑ Tailor microcredential content swiftly to meet evolving sectoral demands.
- ❑ Clearly communicate microcredentials' applicability and benefits to targeted sectors.
- ❑ Monitor and document sector-specific outcomes and feedback systematically.

Checklist: Integration into corporate training systems

- ❑ Align microcredentials clearly with existing corporate CPD frameworks.
- ❑ Develop streamlined procedures for employers to incorporate microcredentials into internal training.
- ❑ Offer flexible and modular credential structures compatible with workplace learning.
- ❑ Regularly evaluate integration effectiveness through employer surveys and performance metrics.

5.3 Implementation criteria for access, equity, and inclusion

Access and equity

Microcredentials offer flexible, modular formats that can significantly improve socio-economic equity and access, especially within Southern African contexts. Lesotho promotes flexible admission in TVET and higher education to enhance access for socio-economically disadvantaged learners. South Africa recognises mobile connectivity potential but highlights significant digital access challenges, especially in rural areas, due to high data costs. Namibia similarly identifies infrastructural gaps and affordability as critical barriers limiting equitable microcredential participation. Mauritius integrates microcredentials strategically into workforce planning, emphasising equitable digital and economic accessibility. European insights complement these perspectives: Ireland's subsidised Springboard+ initiative directly targets underrepresented populations, whereas Estonia's affordability challenges highlight the critical need for sustainable financial mechanisms.

Inclusion and learner diversity

Effective inclusion means ensuring microcredentials reach diverse populations, especially marginalised groups, rural learners, women, and those excluded from traditional education pathways. Southern African countries recognise the inclusive potential of microcredentials but highlight the need for more intentional and targeted approaches. Mauritius provides stackable, flexible pathways explicitly designed for inclusive participation. Lesotho and South Africa articulate the necessity for clear RPL frameworks to effectively integrate informal and non-formal educational experiences.

Monitoring and impact awareness

Systematic data collection and analysis are essential to measure and enhance the socio-economic impact of microcredentials. Lesotho emphasises the importance of comprehensive monitoring to understand which groups benefit most from microcredential offerings. South Africa similarly highlights the need for systematic tracking of participation rates and learner outcomes to effectively assess impact. European insights also support robust monitoring. Ireland employs structured mechanisms to track employment outcomes, participation, and equity measures, providing valuable insights for strategic improvements. Belgium/Flanders highlights the critical role of awareness campaigns for engaging underserved and vulnerable populations.

5.3.1 Checklists: Access, equity, and inclusion

Checklist: Access and equity

- ❑ Develop targeted funding and subsidy mechanisms for marginalised and rural learner groups.
- ❑ Expand and improve digital infrastructure to bridge rural-urban divides and affordability challenges.
- ❑ Design flexible scheduling and learning options to accommodate diverse learner needs.
- ❑ Monitor access and participation trends and systematically identify barriers to participation

Checklist: Inclusion

- ❑ Develop and implement specific policies targeting inclusion of underrepresented groups, ensuring they are actively reached.
- ❑ Promote stackability of microcredentials, facilitating flexible entry points and inclusive learner pathways.
- ❑ Create and run national awareness campaigns about the potential value of microcredential opportunities, designed to attract and support diverse learner groups.
- ❑ Establish clear frameworks, and consistent process and practices for recognising and validating prior informal learning and non-formal learning (RPL).

Checklist: Monitoring and Awareness

- ❑ Set up systematic and regular data collection methods on learner demographics, participation, and outcomes.
- ❑ Regularly conduct evaluations of the socio-economic impacts, focusing explicitly on equity and employment outcomes.
- ❑ Implement targeted national awareness and outreach campaigns to increase participation using impact data to show value for marginalised and other groups
- ❑ Regularly adapt implementation strategies based on impact assessment findings to continuously enhance inclusivity and equity.

5.4 Implementation criteria for long-term sustainability

Sustainable funding and investment

Financial sustainability is critical to the long-term success of microcredentials, yet remains a key concern in Southern Africa, where countries like Namibia and Lesotho stress the need for stable, diverse funding beyond volatile government or donor sources. Namibia has identified public-private partnerships, industry levies, and donor support as viable options, while Mauritius showcases how aligning microcredentials with national strategies and skills frameworks can unlock targeted public and employer investment. Ireland offers a strong model through initiatives like the Human Capital Initiative and Springboard+, blending public funding with employer contributions to ensure accessibility and labour market relevance.

Regulatory frameworks and academic recognition

Clear regulatory frameworks and formal academic recognition are essential to the credibility, portability, and sustainability of microcredentials. In Southern Africa, countries are looking for national or regional microcredential frameworks with associated standards and guidance. European examples show that strong accreditation standards, transparent assessment, and consistent quality assurance build stakeholder trust and enable cross-border recognition.

Digital infrastructure and technology

Robust technological infrastructure, coupled with digital verification systems, ensures transparency, learner mobility, and employer trust in microcredentials. Southern African nations face challenges like limited connectivity, particularly in rural areas, hindering equitable

access and seamless transitions between education and employment sectors. Strategic investments in digital infrastructure, supported by robust data verification systems such as digital badges and secure learner records, are essential. Mauritius and Ireland illustrate how effective digital verification mechanisms can enhance transparency, mobility, and trust, setting examples for effective technology integration.

Stakeholder collaboration and strategic partnerships

Sustainable microcredential implementation relies on strategic, structured partnerships among education providers, industry, government, and learners. In Southern Africa, countries like Mauritius and Namibia stress collaborative governance, with Mauritius leveraging national workforce strategies and Namibia highlighting the need for clear stakeholder roles and continuous dialogue. Similarly, in Europe, multi-stakeholder collaboration ensures industry engagement, keeps microcredentials relevant and demand-driven, and supports their integration into broader education and employment systems.

5.4.1 Checklists: Long-term sustainability

Checklist: Sustainable funding and investment

- ❑ Establish diverse and sustainable funding sources.
- ❑ Provide targeted financial incentives to stakeholders.
- ❑ Regularly evaluate financial strategies for adaptability.
- ❑ Explore co-investment models involving industry, government, and international partners.

Checklist: Regulatory frameworks and academic recognition

- ❑ Develop and clearly communicate national accreditation standards.
- ❑ Integrate microcredentials systematically within existing national or regional microcredential frameworks with clear metadata standards and alignment with global standards for issuing digital credentials.
- ❑ Promote cross-institutional agreements to enhance recognition and portability.
- ❑ Maintain transparency and adaptability in regulatory processes.

Checklist: Digital infrastructure and technology

- ❑ Invest strategically in robust digital infrastructures to support equitable, wide-reaching access, especially in underserved areas.
- ❑ Adopt advanced digital verification systems to ensure transparency, security, and portability of microcredential records.
- ❑ Ensure technological compatibility across institutional and employment platforms to support seamless transitions for learners.
- ❑ Build capacity and digital literacy among educators, learners, and institutional administrators for effective technology utilisation.

Checklist: Stakeholder collaboration and strategic partnerships

- ❑ Establish structured and sustainable collaborative governance models involving educational institutions, industry, policymakers, and community groups.
- ❑ Facilitate ongoing stakeholder dialogues for continuous alignment and responsiveness to stakeholder needs.
- ❑ Clearly define stakeholder roles and responsibilities in microcredential ecosystems including policy formulation, curriculum co-design, and quality assurance processes.
- ❑ Actively engage learners and employers in decision-making processes to address emerging challenges and leverage new opportunities.

- ***In summary, the long-term sustainability of microcredentials in Southern Africa and European contexts hinges on diversified and stable funding mechanisms, clear regulatory frameworks, robust technological infrastructures, and effective multi-stakeholder partnerships. Strategic investment in these areas is critical for ensuring microcredentials continue to meet evolving workforce needs, maintain stakeholder confidence, and provide inclusive, accessible educational pathways well into the future.***

SECTION 6

CONCLUSION

6 CONCLUSION

In conclusion, this report highlights the potential roles of microcredentials in addressing the diverse educational and workforce challenges faced by different countries. Lifelong learning is universally recognised as essential, yet its implementation and outcomes are influenced by various socio-economic, geographical, and technological contexts. The alignment of education systems with workforce demands and the inclusivity of lifelong learning pathways remain significant challenges. Microcredentials emerge as a potential dynamic tool to bridge these gaps, offering flexible and responsive solutions tailored to national contexts.

The comparative analysis of country reports reveals shared priorities in adopting microcredentials, such as addressing labour market demands, lifelong learning needs, and digital transformation. Advanced economies demonstrate mature frameworks and infrastructure, while developing contexts focus on addressing systemic inequalities through targeted interventions. While the aspirations of countries like Lesotho, Mauritius, Namibia, and South Africa display some alignment with the European approach, policies and frameworks need to be developed to fit the context, challenges, and realities of Southern Africa.

Key elements in focus include addressing contextual factors (Section 1) unique to Southern Africa, promoting equity and accessibility, and ensuring community relevance. The importance of standardised certification frameworks and transparent, industry-aligned learning outcomes needs to be highlighted. These aspirations reflect a collective preference for learner-centred, workforce-aligned microcredential ecosystems.

The European approach to microcredentials offers a valuable example of a flexible yet standardised framework, demonstrating the benefits of alignment, quality assurance, and cross-sectoral collaboration. This approach can be contextualised to address the unique challenges faced in Southern African contexts. The integration of microcredentials into national education systems, as seen in countries like Estonia, Ireland, and Belgium/Flanders, provides a model for developing countries to explore.

However, challenges remain, particularly in accreditation, recognition, funding, and industry engagement. Strengthening collaborations between education providers, employers, and policymakers will be essential to maximising the potential of microcredentials. Effective microcredentials must promote socio-economic inclusion, ensuring access for underrepresented groups and contributing to equitable workforce participation.

The socio-economic impacts of microcredentials highlight their potential to create more inclusive and equitable educational pathways. Yet, this potential is not fully realised due to affordability barriers, digital infrastructure gaps, and a lack of systematic data on learner participation and outcomes. Industry recognition of microcredentials remains uneven, necessitating a coordinated approach involving policy alignment, employer incentives, and structured frameworks.

Managing quality assurance for microcredentials involves internal and external oversight, with countries adopting different approaches based on their regulatory maturity. Institutional standards vary widely, with some countries integrating microcredentials within existing quality assurance frameworks, while others face challenges due to the absence of national guidance.

6.1 Summary of key recommendations

The following table clusters the most significant recommendations of this synthesis report according to specific categories.

Table 6-1: Summary of key recommendations

CATEGORY	RECOMMENDATIONS
Definitions and policy	▶ Establish clear, context-relevant definitions ▶ Strengthen system readiness through regional, national, and international policies and frameworks
Stakeholder engagement and collaboration	▶ Build inclusive stakeholder engagement processes ▶ Strengthen public–private collaboration
Quality assurance and certification	▶ Prioritise quality assurance and certification ▶ Embed monitoring and feedback systems
Access and equity	▶ Promote equity, access, and affordability ▶ Expand access through digital platforms
Learning pathways and recognition	▶ Enable stackability and recognition pathways ▶ Promote inclusive lifelong learning
Alignment with market needs	▶ Align provision with labour market needs ▶ Support sector-specific and national priorities ▶ Promote economic diversification, industrialisation, and sustainable development

- ***Finally, microcredentials hold significant promise for enhancing lifelong learning and workforce development. By addressing the diverse needs of learners and employers, and through coordinated efforts to standardise and recognise these credentials, countries can build more adaptable and resilient education systems capable of meeting the demands of the modern economy.***

REFERENCES CITED

African Continental Qualifications Framework (ACQF). (2023). *Microcredentials: Concepts, debates, experiences – Towards a common understanding in different parts of the world* (ACQF Thematic Brief 13). https://acqf.africa/capacity-development-programme/thematic-briefs/acqf-thematic-brief-13-micro-credentials-concepts-debates-experiences-2013-towards-a-common-understanding-in-different-parts-of-the-world/@@display-file/file/Thematic%20Brief%2013_Micro-credentials_towards%20common%20understanding_WEB.pdf

African Union. (2018). *African Qualifications Framework (AQF)*. African Union Commission. https://au.int/en/documents/20180516/african-qualifications-framework

Association for the Development of Education in Africa (ADEA). (2022). *Study on the use of ICT in education and remote learning during crisis and required investment for digital transformation of African countries*. https://www.adeanet.org/en/publications/synthesis-report-use-ict-education-remote-learning-during-crises

Association for the Development of Education in Africa (ADEA). (2022). Study on the use of ICT in education and remote learning during crisis and required investment for digital transformation of African countries. https://www.adeanet.org/en/publications/synthesis-report-use-ict-education-remote-learning-during-crises

ATLAS.ti. (2023). Understanding AI coding in ATLAS.ti Web - ATLAS.ti Help in English.

Bank of Namibia (2024). Economic outlook. https://www.bon.com.na/CMSTemplates/Bon/Files/bon.com.na/cb/cbe629c e-f08a-4b84-b521-dd4c54c2d131.pdf

Bank of Namibia. (2024). Economic outlook. https://www.bon.com.na/CMSTemplates/Bon/Files/bon.com.na/cb/cbe629ce-f08a-4b84-b521-dd4c54c2d131.pdf

Bank of Namibia. (2024, August 8). Economic outlook. https://www.bon.com.na/CMSTemplates/Bon/Files/bon.com.na/cb/cbe629ce-f08a-4b84-b521-dd4c54c2d131.pdf

Beukes-Amiss, M., Demas, S., Tuaundu, C., Njembo, B., & Kadhila, N. (2024). The state of play of microcredentials in Namibia. PoMiSA. https://pomisa.hec.mu/documents/PoMiSA%20Country%20Report%20Namibia%202024.pdf

Bolton, H., Mofokeng, T., Akindolani, O., & Shapiro, Y. (2017, July 24). Lifelong learning at the centre: The national recognition of prior learning (RPL) system in South Africa - SAQA. https://www.saqa.org.za/lifelong-learning-at-the-centre-the-national-recognition-of-prior-learning-rpl-system-in-south-africa/

Brown, M., & Nic Giolla Mhichíl, M. (2021). Micro-credentials untethered: A wolf in sheep's clothing? Ireland's Education Yearbook. https://irelandseducationyearbook.ie/downloads/IEYB2021/YB2021-Higher-Education-08.pdf

Brown, M., Mac Lochlainn, C., Nic Giolla, M., & Beirne, E. (2020). Microcredentials: An evolving ecosystem. Dublin City University.

Brown, M., McGreal, R., & Peters, M. (2023). A Strategic Institutional Response to Micro-Credentials: Key Questions for Educational Leaders. Journal of Interactive Media in Education, 2023(1), 7. https://doi.org/10.5334/jime.801

Cedefop (2023a). Microcredentials for labour market education and training: Microcredentials and evolving qualifications systems. Luxembourg: Publications Office (Cedefop research paper, No 89)

Cedefop. (2023). Microcredentials for labour market education and training: Microcredentials and evolving qualifications systems (Research Paper No. 89). Publications Office.

Central Statistics Office (CSO) Ireland. (2022). Census summary: Key findings. Census of population 2022. https://www.cso.ie/en/releasesandpublications/ep

/p-cpsr/censusofpopulation2022-summaryresults/keyfindings/

Central Statistics Office (CSO) Ireland. (2022a). Census summary: Key findings. Census of population 2022. https://www.cso.ie/en/releasesandpublications/ep/p-cpsr/censusofpopulation2022-summaryresults/keyfindings/

Central Statistics Office (CSO) Ireland. (2024, November 17). Ireland 2023: The year in numbers. https://www.cso.ie/en/releasesandpublications/ep/p-yin/ireland2023theyearinnumbers/

Central Statistics Office (CSO) Ireland. (2024, November 17). Ireland 2023: The year in numbers. https://www.cso.ie/en/releasesandpublications/ep/p-yin/ireland2023theyearinnumbers/

Council of the European Union. (2022). Recommendation on a European approach to micro-credentials for lifelong learning and employability. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022H0627(02)

Council of the European Union. (2022, June 16). Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability (2022/C 243/02). Official Journal of the European Union, C 243/10. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022H0627(02)

Council on Higher Education (CHE). (2023). Communique 2 of 2023 to higher education institutions. Offering of microcredentials by higher education institutions. https://www.che.ac.za/sites/default/files/inline-files/Communique%202%20of%202023%20Offering%20of%20Microcredentials%20by%20HEIs.pdf

Council on Higher Education, Lesotho. (2019). Schedule 8 minimum accreditation standards. Maseru: Council on Higher Education.

De Smet, R., Penders, I., Sourbron, M., Vansteenkiste, S., Boey, R., Gaasendam, C. R., Vandenberghe, C., & Van Onacker, E. (2021). Trendrapport 2021: Kwetsbare groepen op de Vlaamse arbeidsmarkt. DWSE/Steunpunt Werk.

De Smet, R., Penders, I., Sourbron, M., Vansteenkiste, S., Boey, R., Gaasendam, C. R., Vandenberghe, C., & Van Onacker, E. (2021). Trendrapport 2021: Kwetsbare groepen op de Vlaamse arbeidsmarkt. DWSE/Steunpunt Werk.

De Vos, A., Vansteenkiste, S., Struyven, L., Marx, I., Baert, S., Van der Beken, W., & De Coen, A. (2021). Naar een leer- en loopbaanoffensief: Tweede advies arbeidsmarktexperten.

De Vos, A., Vansteenkiste, S., Struyven, L., Marx, I., Baert, S., Van der Beken, W., & De Coen, A. (2021). Naar een leer- en loopbaanoffensief: Tweede advies arbeidsmarktexperten.

Decker, F., & Morlion, B. (2024). The state of play of microcredentials in Belgium/Flanders. PoMiSA. https://pomisa.hec.mu/documents/PoMiSA%20Country%20Report%20Flanders%202024.pdf

Department of Enterprise, Trade & Employment, (2023, July 12). Ministers Harris and Coveney launch Microcreds.ie platform to boost upskilling and reskilling in Ireland. https://enterprise.gov.ie/en/news-and-events/department-news/2023/july/120723.html

Department of Enterprise, Trade & Employment. (2023, July 12). Ministers Harris and Coveney launch Microcreds.ie platform to boost upskilling and reskilling in Ireland. https://enterprise.gov.ie/en/news-and-events/department-news/2023/july/120723.html

Department of Further and Higher Education, Research, Innovation and Science, (2024, January 15). Ministers Harris and Richmond launch 24 new courses to upskill staff and future proof businesses. https://www.gov.ie/en/press-release/a2c4e-ministers-harris-and-richmond-launch-24-new-courses-to-upskill-staff-and-future-proof-businesses/

Department of Higher Education and Training (DHET). (2022). Towards recognition of learning: The imperative for microcredentials. Department of Higher Education and Training. Draft Discussion Paper.

Dixon-Woods, M. (2011). Using framework-based synthesis for conducting reviews of qualitative studies. BMC Medicine, 9(39). https://doi.org/10.1186/1741-7015-9-39

Erasmus+ Capacity Building in Higher Education, Strand 2. (2022). Potential of microcredentials in Southern Africa.

European Commission. (2022). Council recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability (OJ C 243, 27.6.2022, pp. 10–25). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=oj:JOC_2022_243_R_0002

European Training Foundation (ETF). (2023). Guide to design, issue and recognise micro-credentials. https://www.etf.europa.eu/sites/default/files/2023-06/Micro-Credential%20Guidelines%20Final%20Delivery.pdf

Eurostat. (2020). General government expenditure by function. https://ec.europa.eu/eurostat/databrowser/view/GOV_10A_EXP__custom_5465378/default/bar?lang=en

Goode, E., Golden, S., Kelly, V., McGuinn, N., & O'Dea, M. (Eds.). (2024). The state of play of microcredentials in Ireland. PoMiSA. https://pomisa.hec.mu/documents/PoMiSA%20Country%20Report%20Ireland%202024.pdf

Goode, E., Golden, S., Kelly, V., McGuinn, N., O'Dea, M. (Eds.) (2024). The state of play of microcredentials in Ireland. PoMiSA. https://pomisa.hec.mu/

Government of Estonia. (n.d.). Estonia 2035 strategy. https://www.valitsus.ee/media/3926/download

Håkansson Lindqvist, M., Mozelius, P., Jaldemark, J., & Cleveland-Innes, M. (2023). Higher education transformation towards lifelong learning in a digital era – A scoping literature review. International Journal of Lifelong Education, 1(15). https://doi.org/10.1080/02601370.2023.2279047

Hammersley, B. (2017, March 27). Concerned about Brexit? Why not become an e-resident of Estonia. Wired Magazine. https://www.wired.com/story/estonia-e-resident/

Higher Education Commission (HEC). (2021). Higher education commission strategic plan 2022–2025: Building a responsive, relevant and resilient higher education sector. https://www.hec.mu/pdf_downloads/StrategicPlan/HEC_SP2022_2025.pdf

Higher Education Commission Strategic Plan 2022-2025: Building a Responsive and Resilient Higher Education Sector. https://www.hec.mu/pdf_downloads/StrategicPlan/HEC_SP2022_2025.pdf [Mauritius]

Higher Education Commission. (2023). Participation in tertiary education 2022. https://www.hec.mu/pdf_downloads/Participation_inTertiary_Education2022.pdf [Mauritius]

IDA Ireland (2024). Why Ireland for technology investment. https://www.idaireland.com/explore-your-sector/business-sectors/technology

Irish Universities Association (IUA). (2024). Microcreds project overview. https://www.iua.ie/overview-microcreds

Irish Universities Association (IUA). (2024c). What are micro-credentials? https://www.iua.ie/microcreds/

IUA, (2023, July 12). New Micro-credentials Platform Launch Gives Major Boost to Upskilling and Reskilling in Ireland. Launch of MicroCreds.Ie. https://www.iua.ie/press-releases/launch-of-microcreds-ie/

Keevy, J., & Molokwane, P. (2024). Recognition of non-formal and informal skills for young people in Eastern and Southern Africa through the innovation of microcredentials: Towards a microcredential country model for South Africa. Forthcoming UNICEF.

KESI Business Solutions. (2022). A national baseline skills audit study for the Ministry of Education and Training Lesotho. Maseru: MOET.

KESI Business Solutions. (2022). A national baseline skills audit study for the Ministry of Education and Training Lesotho. Maseru: MOET.

Klingberg, S., Stalmeijer, R. E., & Varpio, L. (2024). Using framework analysis methods for qualitative research: AMEE Guide No. 164. Medical Teacher, 46(5), 603–610. https://doi.org/10.1080/0142159X.2023.2259073

Kultuurikomisjon [Cultural Affairs Committee of Estonian Parliament]. (2024). Täiskasvanute koolituse seaduse muutmise ja sellega seonduvalt teiste seaduste muutmise seadus 465 SE [Bill 465: Amendments to the Adult Education Act and related acts]. https://www.riigikogu.ee/tegevus/eelnoud/eelnou/1ae84006-4f07-4209-bd09-fe82eac387bc/taiskasvanute-koolituse-seaduse-

muutmise-ja-sellega-seonduvalt-teiste-seaduste-muutmise-seadus/

Langthaler, M., & Bazafkan, H. (2020). Digitalization, education and skills development in the global South: An assessment of the debate with a focus on Sub-Saharan Africa (ÖFSE Briefing Paper No. 28). Austrian Foundation for Development Research (ÖFSE). https://doi.org/10.60637/2020-bp28

Langthaler, M., & Bazafkan, H. (2020). Digitalization, education and skills development in the global South: An assessment of the debate with a focus on Sub-Saharan Africa (ÖFSE Briefing Paper No. 28). Austrian Foundation for Development Research (ÖFSE). https://doi.org/10.60637/2020-bp28

Lesotho Communication Authority. (2017). The state of ICT in Lesotho. Maseru: Lesotho Communication Authority.

Lesotho Communication Authority. (2017). The state of ICT in Lesotho. Maseru: Lesotho Communication Authority.

Local Government Ireland. (2024). Libraries. https://www.localgov.ie/services/libraries

Local Government Ireland. (2024). Libraries. https://www.localgov.ie/services/libraries

Maqalika, P., & Lekhori, M. (2024). The state of play of micro-credentials in Lesotho. PoMiSA. https://pomisa.hec.mu/documents/PoMiSA%20Country%20Report%20Lesotho%202024.pdf

McCoshan, A. (2023). Case study Ireland: Microcredentials for labour market education and training. In First look at mapping microcredentials in European labour-market-related education, training and learning: Take-up, characteristics and functions. Cedefop. https://www.cedefop.europa.eu/files/ireland_microcredentials_mapping.pdf

MICROBOL. (2022). Microcredentials linked to the Bologna Key Commitments (Common Framework for Microcredentials in the EHEA). https://microbol.knowledgeinnovation.eu/wp-content/uploads/sites/20/2022/03/Microcredentials_Framework_final-1.pdf

Microsoft. (2024). Co-Pilot [AI-assisted writing tool]. https://www.microsoft.com

Ministry of Education and Research of Estonia. (2021). Education strategy 2021–2035. https://www.hm.ee/sites/default/files/documents/2022-10/haridusvaldkonna_arengukava_2035_kinnittaud_vv_eng_0.pdf

Ministry of Education and Research of Estonia. (2021). Education strategy 2021–2035. https://www.hm.ee/sites/default/files/documents/2022-10/haridusvaldkonna_arengukava_2035_kinnittaud_vv_eng_0.pdf

Ministry of Education and Training of Flanders. (2025). https://onderwijs.vlaanderen.be/en

Ministry of Education and Training of Lesotho. (2019). Lesotho qualifications framework. Maseru: MOET.

Ministry of Education and Training of Lesotho. (2022). Draft national policy for implementation of recognition of prior learning. Maseru: MOET.

Ministry of Education and Training of Lesotho. (2022). Draft national policy for implementation of recognition of prior learning. Maseru: MOET.

Mohee, R., Roopchund, O., Baguant, N., Maghoo, V., Sungkur, K., Hurreeram, D., Khedo, K., & Venethethan, D. (2024). The state of play of microcredentials: Mauritius. PoMiSA. https://pomisa.hec.mu/documents/PoMiSA%20Country%20Report%20Mauritius%202024.pdf

Mohee, R., Roopchund, O., Baguant, N., Maghoo, V., Sungkur, K., Hurreeram, D., Khedo, K., & Venethethan, D. (2024). The state of play of microcredentials: Mauritius (PoMiSA). PoMiSA. https://pomisa.hec.mu/documents/PoMiSA%20Country%20Report%20Mauritius%202024.pdf

Namibia Statistics Agency. (2024). Namibia 2023 population and housing census: Main report. Windhoek: Namibia Statistics Agency. https://census.nsanamibia.com/wp-content/uploads/2024/10/2023-Population-and-Housing-Census-Main-Report-28-Oct-2024.pdf

Namibia Statistics Agency. (2024). Namibia 2023 population and housing census main report.

National Council for Higher Education. (2022). 2021 national graduate survey. http://www.nche.org.na

National Council for Higher Education. (2022). 2021 National graduate survey. http://www.nche.org.na

OECD. (2021). OECD skills outlook: Learning for life. OECD Publishing.

Oliver, B. (2022). Towards a common definition of micro-credentials. United Nations Educational, Scientific and Cultural Organization (UNESCO), Paris, France.

OpenAI. (2024). ChatGPT (Jan 2024 version) [Large language model]. https://openai.com

Organisation for Economic Co-operation and Development (OECD). (2023). OECD skills strategy Ireland: Assessment and recommendations. OECD Skills Studies. OECD Publishing. https://doi.org/10.1787/d7b8b40b-en

Organisation for Economic Co-operation and Development (OECD). (2023). OECD skills strategy Ireland: Assessment and recommendations. OECD Skills Studies. OECD Publishing. https://doi.org/10.1787/d7b8b40b-en

Paterson, A., & McDonald, Z. (Eds.). (2024). The state of play of microcredentials in South Africa. PoMiSA. https://pomisa.hec.mu/documents/PoMiSA%20Country%20Report%20South%20Africa%202024.pdf

Pirkkalainen, H., Sood, I., Padron Napoles, C., Kukkonen, A., & Camilleri, A. (2023). How might micro-credentials influence institutions and empower learners in higher education? Educational Research, 65(1), 40–63. https://doi.org/10.1080/00131881.2022.2157302

Posarac, A., Dulvy, A. N., Kika, J., Gebre, T. Z., Monchuk, V., Sidjou, O. R. Z., Kajali Goswami, K., & Bowen, T. V. (2021). Investing in human capital in Lesotho: A framework for a coordinated multi-sectoral approach. The World Bank.

Posarac, A., Dulvy, A. N., Kika, J., Gebre, T. Z., Monchuk, V., Sidjou, O. R. Z., Kajali Goswami, K., & Bowen, T. V. (2021). Investing in human capital in Lesotho: A framework for a coordinated multi-sectoral approach. World Bank.

Ramatsetse, B., & Zenda, R. (2024). Recognition of prior learning for promoting educator development and lifelong learning: The case of TVET colleges. In R. Dlamini, I. Moll, & V. Naiker (Eds.), Technical and vocational teaching in South Africa (Palgrave Studies in Technical and Vocational Education and Training). Palgrave Macmillan. https://doi.org/10.1007/978-3-031-58206-6_6

Reddy, V., & Mncwango, B. (2021). Education and labour market inequalities in South Africa. In W. Pearson Jr. & V. Reddy (Eds.), Social justice and education in the 21st century (pp. 3-24). Springer. https://doi.org/10.1007/978-3-030-65417-7_3

Republic of South Africa (RSA). (2008). National Qualifications Framework (NQF) Act No. 67 of 2008, as amended. Government Gazette No. 31909, 17 February 2009. Pretoria: Government Printer.

Republic of South Africa. (2024). South Africa at a glance. https://www.gov.za/about-sa/south-africa-glance

Ritchie, J., & Spencer, L. (1993). Qualitative data analysis for applied policy research. In A. Bryman & R. Burgess (Eds.), Analysing qualitative data (pp. 173–194). Routledge.

Shiimi, I. (2024). Budget statement for the 2024/25 financial year: Continuing the legacy of his excellency, President Hage G. Geingob by caring for the Namibian child. https://mfpe.gov.na/budget/

Shimpanda, F. (2015). Labour dynamics: NPC policy brief. https://www.npc.gov.na/wp-content/uploads/2023/06/Labour-Dynamics-Policy-Brief-2015.pdf

South African Qualifications Authority (SAQA). (2022). Towards a SAQA discussion document on the recognition of small units of credit and non-credit bearing learning programmes and other achievements and attributes. Pretoria: South African Qualifications Authority.

Southern African Development Community. (2015). SADC Qualifications Framework (SADCQF). https://www.sadc.int/files/4415/6344/6803/SADC_Qualifications_Framework_SADCQF.pdf

Srivastava, A., & Thomson, S. (2009). Framework analysis: A qualitative methodology for applied policy research. Journal of Administration and Governance, 4(2), 72–79.

Statistics Mauritius. (2022). Annual digest of statistics, Mauritius in figures. https://statsmauritius.govmu.org/pages/statistics/by_subject/other/sb_other.aspx

Statistics South Africa. (2022). Census 2022 statistical release (Report P0301.4). https://census.statssa.gov.za/assets/documents/2022/P03014_Census_2022_Statistical_Release.pdf

Statistics South Africa. (2024). Quarterly labour force survey (Statistical Release P0211). https://www.statssa.gov.za/publications/P0211/P02111stQuarter2024.pdf

Sulla, V., Zikhali, P., & Mahler, D. G. (2019). Lesotho poverty assessment: Progress and challenges in reducing poverty (No. 144347, pp. 1–158). The World Bank.

Sulla, V., Zikhali, P., & Mahler, D. G. (2019). Lesotho poverty assessment: Progress and challenges in reducing poverty (No. 144347, pp. 1–158). The World Bank.

UNESCO. (2022). Towards a common definition of microcredentials. https://unesdoc.unesco.org/ark:/48223/pf0000381668

UNEVOC (UNESCO International Centre for Technical and Vocational Education and Training). 2022. Mauritius TVET Country Profile. Bonn: UNEVOC.

United Nations Population Division. (2019). World population prospects: 2019 revision. https://population.un.org/wpp/

United Nations Population Division. (2019). World population prospects: 2019 revision. https://population.un.org/wpp/

Vilson, M. & Kührt, U. (2024). The State of Play of Microcredentials in Estonia. PoMiSA. https://pomisa.hec.mu/

Vilson, M., & Kührt, U. (2024). The state of play of microcredentials in Estonia. https://pomisa.hec.mu/documents/PoMiSA%20Country%20Report%20Estonia%202024.pdf

Vlaamse Onderwijsraad (VLOR). (2023, October 26). Microcredentials as a tool to stimulate lifelong and life-wide learning: Advice on the 'Recommendation on a European approach to microcredentials for lifelong learning and employability' by the Council of the EU. https://www.vlor.be/adviezen/microcredentials-als-instrument-om-levenslang-en-levensbreed-leren-te-stimuleren

Walsh, P. (2023, June 27). Evaluating accredited online programmes: What to consider before signing up to one. Irish Times. https://www.irishtimes.com/ireland/education/2023/06/27/evaluating-accredited-online-programs/

Wikipedia contributors. (2025, January 30). Cabinet of Lesotho. Wikipedia. https://en.wikipedia.org/wiki/Cabinet_of_Lesotho

World Bank. (2022). Lesotho policy notes.

APPENDICES

Appendix A: Country-specific methodologies

Country	Research Methodology
Estonia	1. **Ethics:** Ethical approval for the PoMiSA project was acquired via the South African Council on Higher Education. 2. **Research Method(s):** Desktop literature review. 3. **Data Collection:** From the following categories of resources • Legislative documents published by the Estonian government and Ministry of Education. • Documents published on microcredentials and learning by the European Union. • Statistics on Estonia. • Publications and grey literature on the use of microcredentials in Estonia. 4. **Data Analysis:** Triangulation and expert validation of sources.
Belgium/ Flanders	1. **Ethics:** Ethical approval for the PoMiSA project was acquired via the South African Council on Higher Education. 2. **Research Method(s):** Desktop literature review. 3. **Data Collection:** Using the following documents: • Microcredentials in Europees perspectief. (2021). Vlor. Microcredentials als instrument om levenslang en levensbreed leren te stimuleren. (2023). Vlor • Council of the European Union. (2022). Proposal for a Council Recommendation on a European approach to microcredentials for lifelong learning and employability. • Action plan on lifelong learning. Setting sail for a learning Flanders. (2021). Vlaanderen. 4. **Data Analysis:** Review of literature and expert discussions, using their experience in European projects (e.g. the Erasmus+ project MicroBol - Microcredentials linked to the Bologna Key Commitments).
Ireland	1. **Ethics:** Ethical approval for the PoMiSA project was acquired via the South African Council on Higher Education. 2. **Research Method(s):** Desktop literature review. 3. **Data Collection:** The research team's search strategy focused on contemporary sources including: • Customised Google search using the keywords related to microcredentials such as Stackability, Transferability/ portability, Flexibility, QQI, Accreditation, National Framework of Qualifications, Accessibility, Funding, Policy/strategy/framework development, Recognition of prior learning. • Targeted websites such as the IUA, QQI 4. **Data Analysis:** Consultation with HEI professionals experienced in this area.
Lesotho	1. **Ethics:** Ethical approval for the PoMiSA project was acquired via the South African Council on Higher Education. 2. **Research Method(s):** Qualitative approach (online survey, interviews, stakeholder consultation). 3. **Data Collection:** • A survey was conducted using an online questionnaire to gather primary data from the identified participants. • Consultation with representatives in each of the three categories of providers, regulators and beneficiaries/industries.

Country	Research Methodology
	• Secondary data was used to form the basis of the study. This data was searched from local literature through official documents, policies, acts and other government documents. 4. **Data Analysis:** Thematic analysis of qualitative data.
Mauritius	1. **Ethics:** Ethical approval for the PoMiSA project was acquired via the South African Council on Higher Education 2. **Research Method(s):** Desktop literature review. 3. **Data Collection:** • A comprehensive desktop review of the existing literature included academic articles, government reports, policy documents, institutional publications on microcredentials in the context of Mauritius. • Four targeted surveys. focusing on the following stakeholder groups: (a) regulatory authorities and relevant ministries, (b) TVET institutional leaders, (c) HE institutional leaders, and (d) cross-sectoral contributors to the education ecosystem. 4. **Data Analysis:** Thematic analysis to identify key themes and trends.
Namibia	1. **Ethics:** Ethical approval for the PoMiSA project was acquired via the South African Council on Higher Education. 2. **Research Method(s):** Mixed method. 3. **Data Collection:** • Twenty-seven (27) organisations, including regulatory agencies, professional bodies, and higher education institutions, were identified to participate in the study. • Respondents completed the online questionnaire. • The first workshop aimed at facilitating discussions and gathering inputs from the participants on the status quo of microcredentials • The same participants were invited to participate in the second workshop. The main agenda of the second workshop was to allow the stakeholders to validate the study report. 4. **Data Analysis:** The SPSS programme was used for analysing the quantitative data, while the qualitative data was thematically analysed.
South Africa	1. **Ethics:** Ethical approval for the PoMiSA project was acquired via the South African Council on Higher Education. 2. **Research Method(s):** Collaborative desktop literature review. 3. **Data Collection:** • A literature review was done to generate evidence through online searches of microcredential development in the South African Post-School Education and Post-School Education and Training (PSET) sector (an area that is not well -developed in the formal literature). 4. **Data Analysis:** The input was analysed by expert critical reviewers; and reflected upon during a stakeholder verification session**.**

These final draft versions of the country reports were checked by author teams in late November to early December 2024 and uploaded to a shared project space on Google Drive. These were made available in February 2025 on the PoMiSA website (https://pomisa.hec.mu/).