The innovation of micro-credentials

Enhancing the recognition of non-formal skills for young people in Eastern and Southern Africa

unicef ❁
for every child

≡ Austrian
Development
Agency

Executive summary

Interest in the contribution of micro-credentials to education and workforce development continues to rise; but their availability and use can vary widely across world economic regions, industries and education and training institutions. For instance, the demand for and development of micro-credentials is likely to differ between low-, middle-, and high-income countries[1], and may be slower in low-income countries as infrastructure challenges, for the time being, limit both online access and demand. Likewise, in the Eastern and Southern African regions, micro-credential availability, development and use differ.

This think piece refers to a **micro-credential as a form of recognition awarded upon successful completion of a short, focused learning programme that equips a learner with specific skills** or competencies. Being awarded a micro-credential signals recognition that a learner has successfully completed a skills training and assessment process that involved acquisition of specific competencies, knowledge and skills. The micro-credential is a tangible credential that represents the outcome or result of the learner having participated successfully in the programme.

The components of a micro-credential are: a skills training component in the form of an education programme or intervention involving a set curriculum, structured learning activities and work exposure; validation and recognition within a government qualification framework environment or by other labour market stakeholders (employers, industry bodies, private providers, professional bodies); processes and activities for assessment of the learner's attainment of specified learning objectives; and finally, certification of learners who fulfil the micro-credential's requirements.

This think piece highlights the importance of context-specific micro-credential programme implementation, collaboration with employers and industry and the integration of micro-credentials into broader qualification frameworks and active labour market programmes to enhance youth employment prospects in ESA.

---

1   Of the 21 countries in Eastern and Southern Africa, as per the UNICEF definition, 15 are low- and six are middle-income countries
https://unctadstat.unctad.org/CountryProfile/GeneralProfile/en-GB/108/index.html
https://www.imf.org/en/Publications/WEO/weo-database/2022/April/select-aggr-data

This research will be helpful to:

Staff and skills development practitioners from local non-governmental organizations (NGOs), vocational training centres and youth or community groups, who may see value in exploring training modalities that are sensitive to youth circumstances and needs and that are targeted to address local unemployment and labour market demands;

International development organisations – or donor and funding agencies – focused on education and development related to youth empowerment, who may be interested in incorporating micro-credentials into their programme designs, funding priorities and advocacy; and

Policy makers in ministries of education, labour and rural development, who could be interested in the possibilities of micro-credentials to address youth unemployment;

Researchers and academics, who may be interested in training modalities relevant to combating unemployment in low-income countries to inform further research.

© UNICEF/UN0306559/Abdul

The outcomes of this research-based analysis include a suggestion for the use of micro-credentials to empower youth and address youth unemployment; an argument for the development of targeted micro-credential training programmes; a document to inform policy; and support for the integration of micro-credentials into multidisciplinary development planning. The think piece provides readers with a structured introduction to key decision-making moments in developing and implementing a micro-credentials in low- or middle-income countries (LMICs) with unemployed youth populations in rural and urban areas.

Considerations based on the needs of learners and facilitating their introduction to the labour market

1

Social and financial support:

Social and financial support, especially for those from disadvantaged backgrounds, can help students successfully complete a micro-credential.

2

Access to online environments and familiarity with online learning:

Addressing students' low levels of exposure to and familiarity with online environments (such as digital literacy, connectivity and availability of devices) require dedicated time and resources.

3

Local labour market employment:

The availability of formal and informal jobs in local labour markets and the variety of choices in rural areas must be considered.

4

A balance between job-specific and transferable skills:

Finding the right balance between job-specific and transferable skills in the context of micro-credentials is important. The value of these skills can vary across different industries and job roles.

5

Work experience placement:

Incorporating work placements into micro-credential programmes would provide youth with practical exposure that enhances their employability.

6

Supporting access to credit for self-employment:

Micro-credentials can contribute to the potential of youth embarking on self-employment to access credit or seed-funding.

7

Tracking the impact on employment of youth participants:

The impact of micro-credential training programmes on employability should be systematically measured through surveys, pre- and post-training assessments, longitudinal studies, interviews and data analysis to understand how these programmes affect beneficiaries and employers.

Considerations for micro-credential design and implementation

8
Programme design and implementation:

The document calls for attention to the selection of the skills and competencies offered in micro-credential programmes as well as the design of programme delivery and the utilization of online platforms for learning and interaction.

10
Monitoring and evaluation:

Robust monitoring, evaluation and good quality data collection on the implementation process and viability of the curriculum should be integrated into the implementation of micro-credential programmes to assess their impact and inform improvements.

9
Validation of micro-credential programmes:

Micro-credential programmes are flexible and can vary to meet particular occupational skills needs. Thus, a more tailored approach to the validation of micro-credentials that takes into account their relation to occupational roles and tasks should be adopted to facilitate accreditation.

11
Sharing data and learnings through collaboration between programmes:

Programme-level tracking and sharing of processes and the progress of students provides data that can help assess the effectiveness of these programmes and improve them.

Expanding credentialing systems in government and frameworks in the region horizontally and vertically

12
Continental and regional developments:

The development of qualification frameworks such as the African Continental Qualifications Framework (ACQF) and regional qualifications frameworks such as the Southern African Development Community Qualification Framework (SADCQF) and the East African Qualifications Framework for Higher Education (EAQFHE) offer opportunities for integrating micro-credentials into formal qualification systems.

13
Engaging with micro-credential initiatives in operation:

Assess how far and how effectively national qualification frameworks and credentialing systems have developed the capacity to incorporate new micro-credentials, and how to extend this capacity down to local project or programme levels.

National and regional level considerations

14

Urban youth migration:

In areas characterized by high youth unemployment and limited formal job opportunities, urbanization is often perceived as a path to securing employment. This requires careful consideration of the skills and knowledge content of the micro-credential curricula provided for rural youth, who may prefer skills aligned with urban opportunities over agriculture focused skills.

15

Rural areas:

While digital modes of training are increasingly popular, some rural areas will still require face-to-face micro-credential programmes due to lack of infrastructure and the high cost of internet access.

16

Active labour market policies:

Connecting micro-credentials with active labour market policies and public employment services can enhance opportunities for unemployed youth to access gainful employment. For instance, basic income grants to households that otherwise may not be able to do without the contribution of working youth to household income can create space for youth to look for jobs; government-subsidised public works programmes can provide short term employment and opportunities to learn new skills.

17

Collaboration at the local labour market level:

Where possible, collaboration between industry and education and training providers in micro-credential development and delivery is recommended. This approach will need to consider the extent of networking and cooperation between employers, which is likely to be higher in urbanised areas where concentrations of industry are higher. In rural areas, employers may need individual attention.

Acknowledgements

Table of contents

List of tables, figures and boxes

Acronyms

ACQF	African Continental Qualifications Framework
ALMP	active labour market programmes
EAC	East African Community
EAQFHE	East African Qualifications Framework for Higher Education
EIIP	Employment-Intensive Investment Programmes
ESA	Eastern and Southern Africa
EPWP	Expanded Public Works Programme
ETF	European Training Foundation
f2f	face-to-face
ICT	information communication technology
IT	information technology
ILO	International Labour Organization
INGO	international non-governmental organizations

L2E	learning to earning
LMIC	low- or middle-income country
NGO	non-governmental organization
NPO	non-profit organization
OECD	Organisation for Economic Co-operation and Development
NQF	National Qualification Framework
PAEEJ	Programme d'Autonomisation Économique et d'Emploi des Jeunes
SADCQ	Southern African Development Community Qualification Framework
SAP	System Applications and Products in Data Processing
TVET	technical and vocational education and training
YOMA	Youth Agency Marketplace

© UNICEF/UNI213084/Runsico

Section 1

Insights from global and local implementation of micro-credentials

Key points in this section

▶ micro-credentials provide proof of identifiable learning outcomes and acquired knowledge and skills;

▶ the development and implementation of micro-credentials has continued apace, mainly in high-income contexts;

▶ there are wide differences between countries and regions in their experience of micro-credential adoption, development and implementation at scale; and

▶ achieving the full potential of micro-credentials in ESA will require context-specific factors to be considered.

1.1

Introduction

This think piece has been prepared to encourage dialogue and debate on the phenomenon of micro-credentials and their contribution to improving employment opportunities in Eastern and Southern Africa (ESA). The think piece forms part of a larger project commissioned by UNICEF to investigate current micro-credential[2] projects and initiatives in Burundi, Uganda, and South Africa.

The research aims to contribute towards the formulation and design of country-relevant micro-credential models that are practice-focused, actionable, and scalable and lead to the increased recognition of non-formal skills development opportunities to facilitate transitions for unemployed youth into the labour market.

The think piece is oriented towards uncovering strategic decision-making points in developing and implementing a micro-credential for application in low- and middle-income countries (LMICs). Based on the empirical research done for this publication, consideration is given to seven areas or themes where strategic decision-making can potentially contribute to more effective and efficient use of resources and impact. In addition, the think piece is intended to share information that may bring improvements to programme design and delivery of current micro-credential projects

---

2   The hyphenated form of 'micro-credential' is preferred as it reflects that a micro-credential can also be considered a smaller unit of a compound credential or qualification. See https://unevoc.unesco.org/home/TVETipedia+Glossary/lang=en/show=term/term=micro-credential

Box 1:

What is a micro-credential?

A micro-credential is **a form of recognition awarded upon successful completion of a short, focused learning programme that equips a learner with specific skills or competencies.**

Being awarded a micro-credential **signals recognition** that the learner has successfully completed a skills training and assessment process that involved acquisition of specific competencies, knowledge, and skills. The micro-credential is a **tangible credential** that represents the **outcome or result** of participating successfully in that learning intervention.

Components of a micro-credentials include:

Skills training:
This component is a micro-credential delivered as an education programme or intervention involving curriculum composition, structured learning activities and work exposure.

Assessment of learner attainment:
This component comprises the processes and activities required for a learner to achieve the specified learning objectives.

Validation and recognition:
A micro-credential is recognized and validated within a government qualification framework environment or by other labour market stakeholders (employers, industry bodies, private providers, professional bodies).

Certification:
A learner who fulfils the requirements of the micro-credential receives certification and is awarded a certificate or digital badge, providing tangible proof and recognition of the skills and knowledge achieved. This confirmation can be shared with and verified by prospective employers and contributes to a learner's motivation and career development.

Box 2:

What is accreditation?

An accreditation process can apply to a specific learning programme, such as the micro-credential, or it can apply to the institution that has developed and offers the micro-credential:

'The process by which a (non-) governmental or private body evaluates the quality of a(n)... education institution as a whole or of a specific educational programme in order to formally recognize it as having met certain pre-determined minimal criteria or standards.

(Vlasceanu, Grünberg & Pârlea, 2007, p. 25)

NGOs or non-profit organizations (NPOs) may have limited knowledge of government national qualifications framework (NQF) agencies because the function of these agencies is to focus mainly on large public systems such as schooling and higher education. This provides limited opportunities for other training organizations to link upward (vertically) with government accreditation functions.

NGO/NPOs may need to consider alternative informal accreditation by creating horizontal links with employers who are most likely to employ youth who have completed a micro-credential that has been developed by an NGO/NPO based on consultations with the employers about what their skills needs are.

The development and implementation of micro-credentials is occurring at a rapid rate, mainly in high income contexts., and there are wide differences between countries and regions in their experiences of micro-credential adoption, development, and implementation at scale.

We observe that the Organisation for Economic Co-operation and Development (OECD) countries with their relatively advanced economies, high levels of 4IR implementation, emphasis on workforce skills, implementation of credential systems, and digitalization of industries and services including education and training have made substantial progress in this field. These countries also have a strong emphasis on the deployment of micro-credentials in higher education.

The OECD perspective of micro-credentials advanced in high-income economic environments is that micro-credentials serve as an agile vehicle for skills development and training, and their use is rapidly expanding. Over the past decade, awarding of micro-credentials, including digital or alternative badges, have emerged as an increasingly popular tool whereby recognition is awarded for the completion of short learning activities delivered in non-formal learning contexts. This trend, which accelerated during the COVID-19 pandemic, is likely to continue due to the transition in education and training institutions from physical to digital and hybrid learning environments as well as the growth of short or micro-learning offerings from private providers outside of the formal education and training system.

The digital delivery of micro-credentials is also flourishing as the demand from learners and enterprises for evidence of knowledge, competencies and skills acquired through non-formal learning or partial completion of formal education or training increases (OECD, 2021).

Despite the benefits micro-credentials offer, there are still several challenges that result in the value of alternative micro-credentials not being recognized (Sellers et al., 2021), and which must be acknowledged when considering international strategies and the implementation of micro-credentials:

▶ Many employers still view traditional qualifications (e.g. degrees and diplomas) and work experience as 'primary signallers of an individual's knowledge and skills' and are reluctant to embrace the innovation that alternative credentials bring.

▶ Alternative credentials are, for the most part, based on internet connectivity, which is readily available in high income countries, while in low-income countries, the face-to-face (f2f) modality will remain very relevant until infrastructure access is universalized.

▶ Further digitalization of learning risks deepening inequalities and increasing the gender gap: (e.g. boys are 1.8 times more likely to own a smartphone than girls, and additional support such as mentorship, peer-to-peer exchanges, and opportunities to practise skills with project-based work may be limited by available resources).

▶ Lack of awareness of micro-credentials in conservative skilling and workforce development cultures may slow the uptake of micro-credentials.

While the adoption and implementation of micro-credentials varies globally, in ESA countries, knowledge of, familiarity with and the application of micro-credentials is gradually expanding, mainly from a small urban base in sectors such as banking and financial services. There is a need to support and encourage dialogue among practitioners in these countries on the practical implementation of micro-credentials and how to address the unique challenges faced in the region. This publication is intended to assist in this process.

© UNICEF/UNI363480/Schermbrucker

1.2

Insights on development of micro-credentials

A micro-credential is seen as a building block of a credential. Micro-credentials can be stacked into wider credentials, but they are most often associated with the completion of a short training programme. A micro-credential could also reflect non-formal or informal learning experiences.

For UNICEF, **micro-credentials provide mechanisms to certify alternative learning pathways to secondary education or technical and vocational education and training** (TVET). At the same time, micro-credentials are more broadly viewed as vehicles for skills development programmes that can prepare young people for employment or entrepreneurship.

According to the International Labour Organization (ILO), micro-credentials provide proof of identifiable learning outcomes and acquired knowledge and skills gained through short courses or non-formal learning, usually digital[3]. They can be in the form of badges or similar symbols (ILO, 2021).

Despite the power that digital credentials hold in transmitting information and increasing the visibility of an individual's skills, they are often still not recognized in reliable certification systems or qualification frameworks (ILO, 2021). The ILO recommends that national TVET and skills systems

…ensure an appropriate regulatory base and technological framework to support the development of digital credentials that reflect granular skills and knowledge development, to support skills matching as well as ownership and portability of individual skills information

(ILO, 2021, p. 116).

The ILO furthermore provides guidelines to national TVET and skills systems in several areas, including designing employability strategies to create decent work opportunities.

The awareness of micro-credentials as an innovation in the field of education and training is gaining traction but the concept is not necessarily well understood. Furthermore, the uptake of micro-credentials in different country contexts is limited by the lack of access to digital technologies, a supportive electrification infrastructure and the capacity of the labour market to absorb unemployed youth, especially those living in rural areas.

Barriers also stem from a lack of understanding by learners, employers, both public and private education providers, and related intermediaries such as employment services about which micro-credentials can be trusted. Given the wide variations in micro-credentials, their usefulness for opening opportunities for wage increases and upward mobility is uncertain. The complexity of micro-credentials offerings, the integration/ stackability options within existing curricula, the lack of digital solutions for assessment, validation, recognition and storage of micro-credentials and resistance from some stakeholders also play a role (European Commission, 2020; Shapiro, 2020).

---

3   However not exclusively so, as some iterations are offered in-person or in a blended manner.

These observations are important to consider, particularly in environments where some micro-credential innovation projects for youth skilling and employment in the case study countries are intended for the f2f mode as there is limited access to the digital mode, which may also be cost- prohibitive. Nevertheless, the research identified the following features and activities of successful or efficient programmes (OECD 2021, pp. 12-30):

▶ Closer involvement of employers/industry actors;

▶ Work experience placement;

▶ Industry collaboration in the accreditation;

▶ Means of drawing graduates of the pro-gramme into contention for job vacancies;

▶ Generating available data on labour market outcomes of programmes;

▶ Means of providing social and financial support;

▶ Policy that enhances collaboration between industry and education/training providers in micro-credential development and delivery; and

▶ Facilitating job landing through employer engagement and career support.

Some of the activities listed above may be present in some form in LMIC labour markets and micro-credential offerings. There are however some important contextual differences between capacity and resources in high-income countries and LMICs that must be considered.

© UNICEF/UNI417456/Pedro

Table 1:

Characteristics of micro-credential offerings in high-income countries and LMICs

Characteristics of micro-credentials	High-income countries	Low- and middle-income countries
Purpose	Prioritise entry to post-school study	Prioritise access to employment opportunities
Quality assurance	Of less concern if the vendor of a micro-credential is well known in the market (e.g. Microsoft, Coursera, or public sector)	Influx of lower quality offerings online
Data privacy - protection of sensitive or personal information	High priority	Not always considered
Proprietary - privately owned	Mostly market and vendor driven (e.g. Microsoft, Coursera)	Combination of international vendors, some local vendors, and a strong drive from development agencies for open access platforms
Common schema - a standardized structure or format of information that is shared	Strong emerging push for the use of common schemas	Low awareness
Data interoperability - Systematic standardised data collection and sharing	Push for semantic interoperability	Technical challenges and need to capture data for internal operational and decision making use
Links to National Qualification Frameworks (NQFs)	Becoming increasingly important	Less discussed, with micro-credentials seen as 'outside of the NQF'

Drawing from this comparative table, high-income countries and LMICs are seen to be at different stages in the development of micro-credentials. This is to be expected since high income countries are closer to the front of the innovation curve than LMICs. Consequently, issues such as data interoperability, evolution of common schema and data privacy as well as the importance of achieving quality implementation are under discussion in ESA countries, indicating that they are at earlier stages in their evolution towards progress in the design and implementation of micro-credentials.

Apart from adopting valuable learnings from high income countries, **achieving the full potential of micro-credentials in ESA countries will require several context-specific factors in African micro-credential ecosystems to be considered**.

1.3

The potential of micro-credentials to support and expand youth employment in ESA countries

The central intention of this project is to support and improve the likelihood of unemployed youth being able to find employment through the implementation and provision of micro-credential-based skills programmes that result in the award of a credential, as and where needed.

Unemployment – especially among young people – is a multifaceted local, national, and global challenge affecting all societies. This document focuses in particular on the needs of unemployed youth and employers for the means to 'find' each other as the former search for employment and the latter for relevantly skilled employees.

An accreditation has the potential to powerfully impact an employer hiring decision. It provides just one, though important, mean to assess the value of skills and capabilities that a young work-seeker offers.

1.4

Fieldwork and data gathering

This regional think piece is grounded on sound empirical activities. The data collection activities supporting its formulation were regional online project-level workshops followed by online country focus group workshops. JET project researchers (local fieldworkers) on site in each country conducted country-level fieldwork involving **four micro-credential project case studies per country** (with three to four key informant interviews per case study). The fieldwork resulted in four country reports – a total of 12[4] in all. The country reports were reviewed by in-country UNICEF teams.

The case studies conducted were of projects that had been established to provide micro-credential opportunities for unemployed youth and early school leavers, aimed at addressing social, economic, and labour market conditions that rural youth must negotiate in their efforts to secure employment. Organizations engaged in micro-credentials development and implementation were identified through referral according to a snowball methodology.

The number of cases permitted some freedom to paint a picture of micro-credential activity across all the projects but offered less information regarding country level characteristics. Analysis of the case study data enabled observations to be made on the evolution of micro-credentials overall. The general observations will be used to develop a generic framework (Appendix B) that national teams with experience of the domestic micro-credential terrain and youth needs can take forward to develop a model with features that link to local needs in the national context.

Background information on the case studies is provided in the box below while information related to micro-credentials is incorporated in the text of this report.

---

4   A table summarising the findings is provided in Appendix A

Box 3:

Background to case studies

▶ **Funding and management:** Most of the projects (nine) are funded and managed directly or indirectly by international non-governmental organisations (INGOs) including UNICEF, World Vision, the Norwegian Refugee Council and SPARK (an international fundraiser and training provider mainly in low-income countries). One project in Burundi and two in South Africa receive government funding. One is a self-funded NGO.

▶ **Spatial location:** Across the three countries, four projects are rural, three are in mixed peri-urban localities, four are urban, and one is online only.

▶ **Age of youth participants:** The target demographic is broad and age ranges are not necessarily enforced. One project explicitly referenced refugees as its core target and another, female learners.

▶ **Entry requirements:** Most programmes do not formally specify entry requirements. In a few instances, school leaving certificates are required.

▶ **Language of learning and instruction:** Multiple languages are used in the process of teaching and learning and code switching between official languages and indigenous languages is incorporated during f2f teaching and learning.

Examples of programmes examined in the case studies follow.

Box 4:

Rural Program for Economic Empowerment and Youth Employment in Burundi

The *Programme d'Autonomisation Économique et de l'Emploi des Jeunes* (PAEEJ) is a government programme initiated in 2021 with the aim of facilitating a young person's journey in the labour market in Burundi by contributing to capacity building, youth entrepreneurship and youth employability. It has reached approximately 3 000 young people and is a broad-based programme intended to reach large numbers of rural youth.

The training offered by PAEEJ is largely focused on the agricultural sector as well as business, with courses related to the entrepreneurial journey that young people in Burundi need. To this end, they are trained on developing a business plan, how to manage a business and how they can connect to the market. More specific training is also offered relating to the field that youth may be in, for example if training specific to the agricultural sector is necessary, PAEEJ facilitates this.

Courses are generally ten days in length. A certificate of participation is awarded to individuals engaging in the courses. A large part of the work that PAEEJ does is also focused on sensitization and changing youths' mindsets so as to not always be reliant on government jobs. PAEEJ is working with a University of Burundi research unit, *Centre Universitaire de Recherche pour le Développement Economique et Social* (CURDES), and UNICEF to carry out a labour market study that will indicate what jobs are needed in the market, and training will be formulated accordingly.

PAEEJ engages with employers to secure internship positions, both in the formal and informal sector, and is negotiating with public institutions that are offering internships to employ 50% of the interns.

Although there is a high demand for these programmes, PAEEJ is not able to reach youth in all sectors as it is largely still operating at a f2f level; however, online training is one of the priorities for the entity. The PAEEJ Academy is the online interface for training, and work is underway with UNICEF to establish online training modules. It was noted during the interview with the organization that moving the content online is a difficult task, with questions being raised about the management of the online process. It was noted that changing the mindset of youth so that they are more open to online learning is quite important as there is a notion that learning online is not really professional. Also, challenges with internet infrastructure in the country prevent youth from engaging fully in online learning.

Box 5:

Digital platform 'Youth Agency Marketplace' (Yoma) and partners

Yoma is a digital platform providing youth aged between 16 and 24 years across the world with access to free learning opportunities to build and transform their futures by actively engaging in social impact tasks and connecting them to employers. Co-designed with youth, Yoma is supported by an ecosystem of partners, including UNICEF, GIZ, Goodwall, Umuzi, RLabs and DIDx, its founding members. Since its launch in 2020, there have been more than 3 million engagements from young people through various opportunities. Currently, Yoma is being incubated by RLabs in South Africa, and is active in eight countries.

As young people engage in online certified learning and skilling opportunities (provided by Atingi, Cisco, Umuzi, Accenture, GLEAC) through Yoma, their activities are recorded on their profile using blockchain technology. This allows them to build a personal, verifiable digital curriculum vitae (CV) with trusted, stackable credentials which they can use to market themselves to employers.

In addition, the Yoma ecosystem partners are now establishing learning to earning (L2E) pathways that connect specific relevant learning opportunities to work-based learning and/or job opportunities in selected sectors:

▶ the digital pathway offered by Umuzi and the multinational software corporation SAP SE (SAP) for transitions into the digital economy;
▶ the green pathway for climate change action and transitions into the green economy; and
▶ the ambassadorial pathway that encourages young people to drive change in their communities.

Box 6

Digital L2E pathway powered by Umuzi and UNICEF

The South Africa-based non-profit organization Umuzi – also an ecosystem partner and founding member of YOMA – has been developing and delivering a digital L2E pathway for African youth, with a focus on unemployed and marginalized young people, in partnership with UNICEF. This includes targeted online and offline outreach to young people, providing high-quality, market-relevant, and certified digital skills training and accelerating transitions into work through employability sprints and placement in work experience.

Umuzi first started conceptualizing and delivering industry-relevant digital skills courses for unemployed youth in South Africa. These courses were delivered online and in-person over a nine-month period, with three-months of workplace experience.

In partnership with UNICEF in ESA, Umuzi has been testing and documenting a digital L2E pathway for marginalized young people in ESA, with an initial pilot focusing on youth on the move in Uganda. This pathway takes targeted youth through asynchronous, fully remote certified digital skills training opportunities (e.g., Grow with Google and Meta Blueprint), with personalized learner support, onto further upskilling opportunities to complete industry-recognized certifications in digital skills (e.g. CompTIA, Meta blueprint, and Grow with Google), activities to build their employability skills (e.g. building a CV, design thinking) and, finally, placement in three-month internship opportunities.

In 2022-2023, this initiative was tested online with 550 young people across ESA, and specifically 50 Youth on the Move learners in Uganda who have received additional learner support and stipends to go through this pathway, as well as placements in internships with local Ugandan employers. Umuzi works very closely with industry stakeholders and beyond to continuously assess the skills needed, provide training course licenses, and identify employment opportunities for youth.

This pathway linking high-quality training to work-based learning opportunities has demonstrated great impact on young people's successful transition into work. The costs associated with this hands-on, high-quality support to learners throughout the pathway is relatively high, and Umuzi and partners are working with the private sector to establish a sustainable and scalable financing model.

Section 2

Key findings

Key points in this section:

▶ platforms play a vital role in supporting micro-credential learning through concentrating a variety of easily accessible employment support resources;

▶ youth are increasingly exposed to online environments, but this can increase a rural-urban online divide;

▶ customized curriculum choice, learning design and implementation are each crucial aspects of localized micro-credential delivery;

▶ quality face-to-face programmes remain vital on a large scale, especially in rural areas which experience online and electrification infrastructure deficits;

▶ the modality of teaching and learning varies in micro-credential programmes due to differences between programmes and household resources of learner participants;

▶ programmes vary in emphasis on occupational, entrepreneurial, transferable, digital and foundational skills;

▶ efficiency can be enhanced in programme design to raise chances of access to work exposure and quick transition into waged employment;

▶ programme owners need better data about their students and operations for informed decision-making;

▶ government active labour market programmes at regional and local level are a potential source of financial support for youth participants' households; and

▶ micro-credential alignment with specific occupational directions is most effective where programmes have existing understandings with the employers they supply.

© UNICEF/UN0488668/Mvula

2.1

Introduction

Based on the data gathered from interviews with personnel of micro-credential programmes in each country, the following seven key themes emerge on ways in which the current projects have conducted their project work. Summary statements for each theme are presented below. Thereafter, this chapter explores the relevance of each theme for creating fit-for-purpose, impactful micro-credentials for unemployed youth.

1. **Understanding youth skills and accreditation needs:**
   The findings highlight the diverse needs of youth participants, emphasizing the importance of tailoring programme delivery to address these needs effectively. Moreover, the wide variation in youth exposure to online environments underscores the need for flexible and inclusive approaches to programme design and delivery. Understanding and addressing these factors can enhance the relevance and efficiency of micro-credential programmes, ensuring they meet the specific needs of youth in Burundi, Uganda, and South Africa.

2. **Strategic adoption of various modalities for micro-credential delivery:**
   This section delves into the factors influencing the selection of micro-credential delivery modalities such as online platforms or face-to-face instruction. It discusses the implications of these choices on the teaching and learning process based on insights gathered from the projects studied in the three countries. Understanding the strategic considerations behind modality selection is crucial for optimizing the effectiveness and accessibility of micro-credential programmes for unemployed and school leaving youth.

3. **Critical selection of skills and curriculum focus:**
   The findings underscore the importance of strategically selecting the skills and curriculum focus of micro-credential programmes to align with sectoral and occupational demands. By identifying key areas of skills development and focusing on relevant sectors, programmes can better prepare youth for employment opportunities in their respective contexts. This section provides insights into the sectoral and occupational directions for micro-credentials based on the specific needs and opportunities observed in Burundi, Uganda, and South Africa.

4. **Importance of accreditation for accessing work opportunities:**
   This section emphasizes the critical role of accreditation through micro-credentials in facilitating access to work opportunities for youth participants. It highlights the significance of recognized credentials in validating skills and enhancing employability. By emphasizing the importance of accreditation, the report underscores the value of micro-credentials as a pathway to employment for unemployed and school-leaving youth in the three countries.

5. **Linkages with government labour market policies:**
   The findings underscore the importance of establishing linkages between micro-credential programmes and government-supported social programmes and active labour market policies. Collaborating with government initiatives can enhance the sustainability and impact of micro-credential programmes by aligning them to broader policy objectives aimed at addressing youth unemployment and skills gaps.

6. **Government and regional accreditation frameworks:**
   This section explores the existing government accreditation frameworks and alternative pathways for accrediting micro-credentials. It discusses continental and regional developments in accreditation and highlights the role of micro-credentials in supporting more flexible learning systems. By understanding and navigating accreditation frameworks, mi-

cro-credential programmes can enhance their credibility and relevance within the broader education and employment landscape.

7. **Practical elements:**
The final section emphasizes the importance of empirical data for improving micro-credential programmes and prioritizing efficiencies

in the project process to facilitate successful outcomes for programme graduates. By focusing on practical elements such as data-driven decision-making and streamlined processes, programmes can better support unemployed and school-leaving youth in accessing work exposure or employment opportunities upon completion.

2.2

Identify youth participant's needs and aspirations to improve relevance and efficiency of programme delivery

Micro-credentials open up opportunities for youth living in areas where employment is mainly in seasonal or informal labour to seek work in other localities.

> **In developing a micro-credential, it is essential to engage with youth to identify their needs and work aspirations**
>
> (Mullan & Broadbent, 2021)

including their current skills and education levels, aspirations and career goals, awareness of work opportunities outside of the locality, mobility/migration preferences, levels of determination and perceived barriers to employment.

To build constructively on youth participants' aspirations, it is useful to provide constructive and realistic support, encourage participants' capacity to research and gather information about opportunities and offer skills that are relevant locally as well as in other centres. For example, the PAEEJ in Burundi aims to assist rural participants with limited prior exposure online to be able to effectively use this resource in urban areas where online access is accessible.

© UNICEF/UNI416914/Sewunet

2.3

Consider variations in level of youth exposure to online environments

In low-income countries, it is important to factor in the wide variations in access to online devices and sufficient familiarity with the internet that impact on whether micro-credential programmes can be offered online at all.

▶ Individuals using the internet as a percentage of the population by country (2020) were: Burundi 9.4%, Uganda 19.9% and South Africa 70%[5].

▶ Population access to electricity in percentages by country (2020) were: Burundi 11.7%, Uganda 42.1% and South Africa 84.4%[6].

▶ Rural electrification as a percentage of the population by country (2020) were: Burundi 3.5%, Uganda 32.8%, South Africa 75.3%[7].

Access to, knowledge of, familiarity with and confidence in using online productivity tools and then experience of and capacity to undergo a learning programme online can vary widely among youth. Youth in rural villages may have very limited, intermittent access to computers and exposure only to basic low-level technology such as phones capable only of voice and SMS. This scenario is prevalent in Burundi but somewhat less so in Uganda and South Africa.

In each of these countries however, there remain numbers of rural unemployed youth in families with limited experience in the online world. Thus, in some areas, only f2f teaching and learning will be feasible while in others, blended teaching approaches may be possible. Further, we observe that one practical problem

in generating opportunities for access to online micro-credentials for employment in the formal sector is the variety of experience, backgrounds and learning needs among youth in most ESA countries.

This factor will need to be considered through online orientation and e-learning orientation familiarizing learners with the digital tools and platforms used for online learning, explaining how to navigate online courses and providing guidance on effective, online learning strategies. Providing for this need is necessary to ensure participants can properly realise the full benefit of the programme or risk low efficiency wastage of resources.

2.3.1 Importance of quality face-to-face programmes in rural areas

As highlighted above, a high proportion of the population in Burundi (86%) and Uganda (74%) and to a lesser extent South Africa (32%) live in rural areas, which may be outside of the reach of both the electricity grid and internet access. High costs, low accessibility and the unreliability of internet services and electricity coverage issues are widely experienced in these areas. Thus, there is still a need for offering f2f and/or blended micro-credentials in rural areas, and while conditions in these areas improving, delivery of micro-credentials via a f2f modality will likely be the default.

Over time, the project owners might consider merging the f2f modality into a hybrid mode programme offering but this might have future financial implications.

---

5   Oxford University & Oxford Martin School (2023) https://ourworldindata.org/internet
6   Source: World Bank (2023) https://data.worldbank.org/indicator/
7   Source: World Bank (2023) https://data.worldbank.org/indicator/

2.4

Weigh up factors impacting selection of the micro-credential delivery modality

2.4.1 Selection of credential delivery modality

The choice between in-person and online delivery methods will influence the micro-credentialing process, impacting the types of skills that can be captured in the micro-credential, its format and to what extent it is recognized by employers. Micro-credentials can be used to leverage technology for dynamic assessments, simulations and interactive learning experiences that might be challenging to replicate in-person. A selection of in-person and online delivery methods needs to be informed by the type of skills being targeted, the preferences and skills levels of the target audience and industry recognition practices. **Choosing between in-person and online modes requires consideration of the focus of the micro-credentials, the target audience, the targeted learning outcomes, the cost of delivery for the provider and the cost to students in terms of their time and affordability to attend in person or online. It may be that a blended model would meet all the requirements most effectively.** Occupational or skills training online or in-person with little or no practical experience in a workplace is a critical disadvantage for youth competing for jobs and is experienced particularly among rural youth job seekers. The two modes used in synergy would generate value for students in their work trajectories and benefit employers seeking improved productivity.

2.4.2 Curriculum, learning design and implementation

The delivery mode of a micro-credential influences the design of the delivery programme. The valuable features of each of the formats are summarized below.

In-person delivery
▶ F2f Interaction – for real-time feedback, active engagement;

▶ Hands-On Learning – for practising skills that require physical presence and practice;
▶ Group Activities – for collaboration and communication;
▶ Physical Resources – for access to physical resources such a workshop or simulation environment.

Online delivery
▶ Flexibility – can accommodate learners' personal schedules and locations;
▶ Self-Paced Learning – adjusts the pace of studies to individual needs;
▶ Digital Resources – can enhance information accessibility and learning experience;
▶ Scalability – can upscale delivery to a large, diversely located audience;
▶ Assessment Tools – enables various assessment tools that can give quick feedback.

Owners of the micro-credential project need to consider these advantages and disadvantages. As part of this deliberation, the hybrid option should also be taken into account, especially as it may become the next logical step after f2f once reliable electricity and online access become available locally.

Discussion of examples from projects of conditions impacting on choice of modality of teaching and learning
In-person or f2f was found to be the most frequently used modality for micro-credential programme delivery among the participant programmes, with nine using this modality, followed by one each using the hybrid and online modalities. For example:

The *PAEEJ* programme in Burundi (see Box 3 above) has a majority of rural sites without online access and minimal service for 'old technology' mobile devices. PAEEJ mainly operates in the f2f modality. Typically, in low-income countries with limited access to digital infrastructure or services, hybrid or fully online skills development

programmes for youth are unlikely to become available soon due to limited market viability for online providers and limited funding for infrastructure installation; *Refactory*, a tech-skills provider based in urban Uganda (further detail in Appendix A), utilizes a hybrid model for delivering its micro-credentials; and *Umuzi*, a technology and software programming NPO based in South Africa (further detailed in Appendix A), offers a fully online micro-credential programme that is accessed by youth in Uganda in preparation for arranged employment in Ugandan companies[8].

Reasons for the use of a f2f modality in some urban and rural areas include: 1) The providers and their youth beneficiaries in rural areas will be unlikely to have access to infrastructure and online services or own or have access to devices (smart phones/computers); 2) In urban areas with relatively dense populations, the presence of physical teaching facilities is likely to enable f2f meetings with youth beneficiaries (subject to travel cost); 3) Urban areas provide greater opportunity to access physical work sites, easing the cost of work seeking.

A further disadvantage for rural youth is the limited presence of local businesses in different sectors that can offer work-based experience. The selection of occupational skills in which to train youth becomes a strategic issue, especially where data on demand may not be reliable. This pressure may be relieved through negotiation with employers on placements and work opportunities based on actual numbers to ensure best chances for students.

2.5

Clearly identify the workplace skills and the curriculum focus for the programme

Identify the curriculum focus from: job specific skills related to an occupation or sector, entrepreneurial/self-employment skills or transferable skills.

Where students live, the place where classes are held, and the location of employment opportunities may not coincide. If there are limited employment opportunities near their homes or where they study, micro-credential graduates will be forced to migrate to find opportunities. In these circumstances, providers may consider offering a generic skills programme such as entrepreneurial skills.

In six projects, the core curriculum is referred to variously as: 'entrepreneurial', 'self-employment', 'work skilling' and 'diversified livelihoods', these being oriented toward supporting general employment preparedness or 'work readiness', without explicit reference to occupation specific learning. In most cases, more specific reference is made to the following sectors: agricultural skills, tech-skills/ICT skills, retail, hospitality,

and green skills. This pattern is noteworthy. The reasons providers mainly choose to focus on entrepreneurial skills as the foundation for a micro-credential tend to include:

▶ Avoiding specific occupational skills sets empowers the holders to turn to their own entrepreneurial ingenuity and 'fend for themselves' where the local labour market offers limited employment opportunities;

▶ An entrepreneurial micro-credential may place the holder ahead of competitors in the labour queue, where the majority have no work-related preparation or training; and

▶ An entrepreneurial micro-credential is preferable to an occupation-specific micro-credential as it prepares the holder to be more flexible and able to take up different occupational opportunities.

Possession of an accredited micro-credential generates an opportunity for a young person to obtain

---

8   Interview with the CEO of Umuzi.

employment in the formal sector, with a higher likelihood of decent work conditions and fair contracts. The presence of both transferrable ('soft') and job-specific ('hard') skills in a micro-credential has design and implementation implications: transferable skills, for example, involve interpersonal skills that require practical experiences such as virtual simulations or f2f engagements, as in hybrid micro-credential models. Appropriate tools for assessing transferable skills such as portfolios, self-assessment, online interviews, peer assessment and others are also required.

It is important to recognise that the value that employers allocate to transferable skills as compared to job-specific skills can vary across different occupations and work roles and may also change with skill levels. This is due to the nature of the work, the type of industry and the demands of the job. For example, some jobs require a strong foundation in specific technical or domain knowledge, making job-specific skills more valuable.

2.5.1 Skills to include in a micro-credential

In selecting the skills to include in a micro-credential, consider local occupational patterns and specific local employer demand and receptiveness.

The level and intensity of competition over the real value and contribution of micro-credentials in developing countries is heating up. This is because industries and occupations have massified and become specialised based on their business models, occupational specialisations and the sub- specialisations of occupations, especially in mid- to high-level skills.

This means that skills development and training service providers can focus on and specialise in particular industries, skills or occupations. Their offerings and associated benefits can be more focused and specific. This is useful for both employers and work seekers and especially for training providers, who can hone in on skills offerings that fit the particular skills demand

profiles of enterprises and of workers wanting to gain skills via flexible, micro-credential modalities.

In theory, micro-credentials can assist work seekers to attain the credentials most valued by employers in an incremental fashion. Doing a micro-credential is not as risky as an investment or as costly as completing a whole degree programme of continuous study over several years. Employers benefit from the availability of choice when large numbers of work seekers do the same micro-credentials and compete with each other, enabling the employer to select the best candidate at a competitively priced wage. On the other hand, the work seekers who identify the most valued micro-credentials can advance their chances of employment. In theory then, both work seekers and employers can benefit.

It is useful to follow how industries are reacting to the opportunity for creating youth skilling micro-credentials programmes. For example, the UNICEF/GenU-SAP skilling initiative[9] to prepare young individuals for careers in the digital services sector aligns with recent trends towards the expansion of the financial services industry, particularly in the East African region.

This growth is accompanied by unique sector and occupation-specific demands, which signal the growing importance for youth and for employers to utilize digital credentials and engage in online labour market skills sourcing. However, it should be noted that the industries involved here are based on occupational activities that are facilitated and conducted entirely online. Online training for jobs involving specific types of work contexts needs more complex arrangements between online and in-person training and work exposure. **Selecting suitable occupations and building appropriate micro-credentials that prepare and guide post-school and unemployed youth towards decent work is a critically important decision that involves balancing considerations and trade-offs.** Topmost of these is the current state of labour market demand for the occupational skills in question, followed by the perceived desirability

---

9   https://www.unicef.org/partnerships/sap-unicef-genu-help-young-people-gain-skills-for-employment

of this work among youth and then the ease of converting a micro-credential into employment. The availability of reliable data on these three elements is generally limited in low-income countries.

Interesting data at a continental aggregate level covering the decade between 2006 and 2016, shown in Figure 2, indicates that the biggest contributing sector is agricultural activities, followed by retail (including hospitality), then manufacturing and construction, transport and communication, financial and business services, followed by public administration and services (education, health).

Within this broad context, there are significant shifts that are observed in the employment rates of both young and adult individuals. Notably, there is a substantial migration out of the agricultural sector, where the proportion of adults leaving this sector is twice as high as youth.

This trend can be attributed to factors such as the ongoing need for youth to contribute to household labour and the limited access of youth to financial resources for job searching. There is also a relative decrease in youth employment in the manufacturing sector, primarily due to their lower skill levels compared to adults. Conversely, there is a growing presence of youth in the construction sector, driven by easier access to short-term labour opportunities.

Figure 1:

Sectoral employment shares and changes for young people and adults in Africa, 2006 and 2016

Legend:
- Employment share (most recent year)
- Adults' change in share
- Young people's change in share
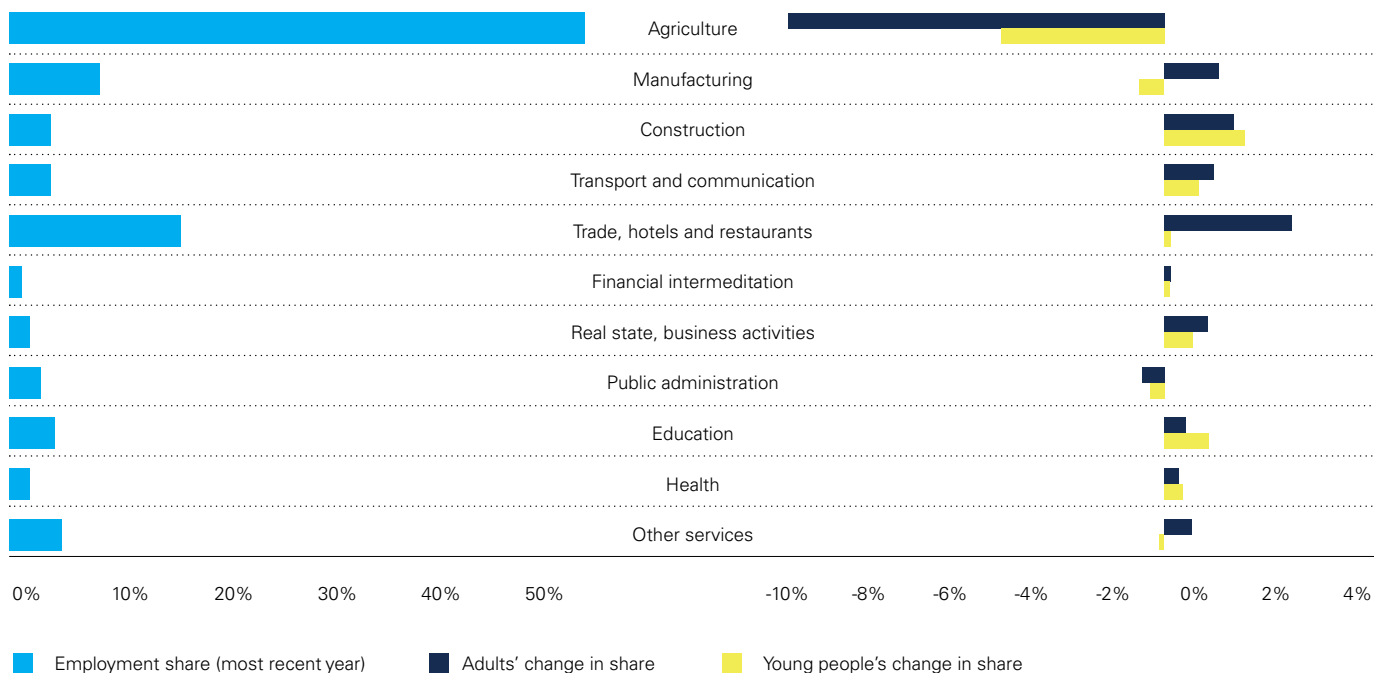
Source: Figure 3.15 Sectoral employment shares and changes for young people and adults in Africa 2006-2016 In: ILO (2020) Report on employment in Africa (Re-Africa) – tackling the youth employment challenge International Labour Office, Geneva.[10]

---

10   Figure report on estimates (a) number of youth and adults employed per sector as a percentage of total employment (2016 or nearest) (b) percentage change (2006-2016) (or nearest year). Youth 15-29.

General directions can also be deduced from country/national level macro-economic data, including sectoral employment. Recent research on country economic development and sectoral employment growth in the EAC relevant to Burundi and Uganda indicates that recently, the five highest GDP value-adding activities have been agriculture, manufacturing, trade and repair, construction, and transport/storage[11] (Kadigi, 2022). This is useful because it identifies agriculture, trade (small retail informal) and construction, which demand mainly low skills work, as substantial employers of young people. Lower proportions would be employed in manufacture, repair, and transport/storage. Several countries in ESA such as Burundi are transitioning from subsistence farming to agro-industrialization, with the potential to add value to basic commodities for local market consumption or further processing and export.

Micro-credentials have the flexibility to support skills development in most, if not all, occupations relevant to economic sectoral demand. However, this document focuses on micro-credentials for youth who have limited work experience or qualifications to build on, and it is important for employment opportunities to be identified in sectors that show potential for economic growth and increased demand for workers that might be drawn from youth who are out-of-school and currently unemployed.

These opportunities are broadly located within the sectoral structures of the three countries which are characterized as follows:

▶ Burundi: employment primarily in agriculture, mostly in informal sector employment, limited formal job opportunities with challenges for workforce development.
▶ Uganda: employment diversified across agriculture, services and the informal sectors, limited formal sector growth, with underemployment a concern.
▶ South Africa: employment distributed among several sectors – services, manufacturing, mining and agriculture, high unemployment and wage disparities.

Micro-credentials selected should fit the sectoral shape of a particular economy and be based on assessment of current and future growth potential. As can be seen in the summary table, there is some variation between the countries but some sectoral opportunities that are similar. This suggests that UNICEF programmes in the technology or ICT sectors could be aligned with the needs in these countries.

Table 2:
Sectoral demand by country

Economic sector	Burundi	Uganda	South Africa
Tech/ICT	x	x	x
Agriculture	x	x	
Tourism		x	x
Health	x		x
Small Business Entrepreneurialism	x		x
Green/Environment		x	x
Manufacturing			x

---

11 GDP per capita also decreased with export concentration, implying that when the EAC countries leverage to widen and deepen cooperation among them, they should choose the right mixes of export goods and services keeping in view of prevailing market factors, including the changing taste in importing countries.

Information from the case studies indicates that currently generic entrepreneurial micro-credential programmes are by far the most frequently implemented, followed by technology/ICT, agriculture, and green skills. In South Africa, Afrika Tikkun offers retail and hospitality micro-credentials amongst others. An important caveat relevant to planning of individual micro-credential projects is that the data discussed above provides a general perspective but is insufficient as an empirical base for selecting skills for inclusion in an actual micro-credential. This decision needs to be made based on local evidence.

2.6

Provide micro-credential accreditation and develop employer networks to open up employment opportunities for graduates

Relating to the entry point of a credential into a national accreditation system discussed in more detail in Section 2.8 is the entry into work opportunities. At the local labour market level, the interactions between young people, service provider agencies and employers as the immediate actors in a training to employment continuum are pivotal in this regard.

Service providers of informal programmes may target formal or informal economy employment opportunities for their graduates. This depends substantially on whether the service provider has networked with employers in the area from which they draw young people to attend their micro-credential programme. **While a credential can increase the employment chances of a work seeker, their chances are substantially increased if they have previously accessed work opportunities.** For this reason, there is a strong tendency for service provider organisations to work in partnership with employers or employer associations to create these opportunities.

Providers might leverage their networks (a) to find employers who are willing to take youth into the workplace for work experience or work-based learning as part of the micro-credential programme, (b) to persuade employers to offer contracted employment to individuals who complete the programme, or (c) to inform their network of employers when the programmes take place and when graduates may approach them for work opportunities. **The service provider would also need to promote the micro-credential among all businesses in the area and more widely in the region. This would be achieved through creating awareness of the credential, drawing attention to testimonials received from employers and through the quality of the work of graduates in workplaces. Their credential should be accessible offline (certificate) and online (digital badge) to employers to create awareness and interest.** Further, meetings with employers on the curriculum design of the micro-credential can encourage participation leading to improvements in the relevance of the credential to local employers.

The programmes provided in ESA also differ from each other according to community circumstances, forms of youth marginalisation (migrant or refugee, gender, education level) resources available, urban-rural location and, importantly, the characteristics of each local economy and its associated labour market. The two examples presented in Section 2.4.2, PAEEJ and Yoma, are good examples of this variation (see Table 5 below). Nonetheless, suppliers of opportunities are consistent in emphasising micro-credentials as the core mode of knowledge and skill acquisition and in incorporating online learning, as available.

Table 3:

Target status is youth graduate employment in formal decent work

Service provider	Primary Level Decisions			Secondary Level (Dependent)			Benefi-ciaries	Strategy	Local training
	Students	Curriculum	Occupational choice	Labour market demand	Enterprise size	Location	Outcomes	Resource use	Local facilitators skills
Umuzi Online / hybrid	Based on employer demand/ require-ments	Use existing (local/ global)	Complex & specif-ic (high)	High compe-tition & Low competi-tion	Large small medium	Urban	Business interest & learner opportu-nity	High concen-tration model 'full wrap-around'	High access
PAEEJ Local/ Face to face	Targeted group	Develop	Limited & low skill	Low competi-tion	Small	Rural	Learner opportu-nity	Low concen-tration	Low access

2.7

Prioritise micro-credential programme efficiencies to limit time delays for youth to access employment

The current need among youth populations in the case study countries is high and rising in line with an increase in the size of the youth population. It is thus of great importance to ensure that micro-credential programmes are efficient processes. **The 'value chain' of a young person accessing, participating in a micro-credential, completing a programme, and finding employment needs to take place in a coordinated process, with minimal time gaps between each stage.** Reducing the time between completion of micro-credentials and securing employment is important as the young person must use limited funds to travel and might need to travel great distances find job op-portunities. Longer time gaps without exposure to the workplace can diminish recent theoretical

and practical experience gained, and employers tend to prefer jobseekers with recent experience as less expenditure and time is needed to get such new hires 'up to speed'.

The journey of a young person looking for a job usually comprises several stages that seldom take place consecutively, without time gaps in-between. Employment journeys that frequently involve detours and repetitive phases of mixed employment or unemployment are nonlinear and recursive and seldom take place consecutively. Table 2 below provides an overview of the different stages and potential exit and access points in the journey of a youth into employment. (NB convert into a diagram).

Clearly, an important goal must be to design and implement a programme that maximises the chances for graduates to achieve formal sector employment as soon as possible. Gaps in the process need to be limited as they represent a potentially significant drag on the efficiency and effectiveness of a programme. Thus, **building employment exposure into a micro-credential programme should be tried wherever possible.** For this reason, creating and maintaining links with employers is highly significant – or else young people may circulate through several similar programmes without any positive impact, being forced to resort to informal work close to home. The risk is higher in households with limited financial resources to support member's job search or travel costs beyond a short period.

Leverage government active labour market policy interventions that benefit unemployed youth as members of beneficiary households

The effectiveness of micro-credential programmes can be substantially enhanced if they are implemented where active labour market programmes (ALMPs), public employment services and government social protection policies are active. These policies contribute to household income that enables senior members to release youth – who might otherwise be working – to attend education and training opportunities. As a result, youth participants are more likely to successfully complete a micro-credential program with the added benefit of raising the impact potential of the programme through lower non-completion rates.

ALMPs refer to focused policies and initiatives implemented by government and public sector institutions to improve work seekers' employment prospects, improve labour force skills and reduce unemployment through training, job placement, wage subsidies and public works projects. ALMPs are designed to provide support and opportunities for unemployed people, including youth and marginalized groups such as women, rural communities and refugees, to become active work seekers in the labour market and transition into suitable employment, and also to address structural labour market challenges.

An example from South Africa is the Expanded Public Works Programme (EPWP)[12] which generates opportunities for women and youth to benefit from income generation and learning a skill for a specified period. In addition, labour-based initiatives, such as employment-intensive investment programmes (EIIPs) and cash-for-work schemes, can offer young people immediate work and income opportunities while at the same time enabling them to take part in the sustained improvement of their local community infrastructure.

Government social protection policies also play a crucial role in raising the chances of youth to access skills development opportunities through micro-credentials. These policies assist in several ways including reducing financial barriers through cash transfers to households, making costs of skills training more affordable to poor and vulnerable households and contributing to reducing the incidence of early school leaving, thus creating a more conducive environment for individual progress and the micro-credential programmes that can open paths to improved work opportunities.

© UNICEF/UN0836615/Andrianantenaina

The lack of government social protection networks can lead to a situation where the provider needs to allocate resources towards supporting youth to stay on the programme, rather than using their resources to improve the quality of learning. In the case of online micro-credentials, this could include funding students' internet connectivity where the costs are prohibitive for local households.

Similarly, public employment services, for example, the Employment Services South Africa (ESSA) online system, where work seekers can register to be connected with an employer or go physically to their nearest labour centre, assist job seekers with job placement, counselling, and career guidance. The opportunity for operating micro-credential schemes in tandem with ALPs and other government employment programmes and services in the same locality could be worth exploring, noting that such services are unevenly available across the three countries and more restricted in Burundi and Uganda as low-income countries.

The table below shows the types of support governments could offer to assist various aspects of micro-credential functioning and to enable youth to attend programmes.

Table 4:

Examples of types of government support

	Types of government support
a	Invest in public online infrastructure to provide services OR Subsidise public access to the internet
b	Social grants provided to targeted beneficiaries such as households or pensioners
c	Fund one or more micro-credential programmes in rural areas
d	Fund stipends for students involved in micro-credential programmes
e	Provide online resources for youth and unemployed, e.g., CV development and interview preparation, career advice Offer public employment services involving matching with employers
f	Active labour market policies to support local communities such as public work programmes, unemployment support

2.8

Explore available means and opportunities to accredit a micro-credential as public or private, formal or informal

At the time this report was being prepared, several African countries were contemplating the introduction of micro-credentials into their national qualifications frameworks (NQFs). Initiatives underway included those of the African Continental Qualifications Framework II[13], the Potential of Micro-credentials in Southern Africa (PoMiSA) that will commence in 2024 and several country-specific initiatives.

Although a good quality micro-credential can be developed and implemented and generate successful working opportunities for a young person, **the value and influence of the micro-credential in the labour market may well be limited without links into a known system of accreditation that is accessible. Being linked into and endorsed by such a system confers an assurance of a micro-credential's relevance, legitimacy and quality for youth searching for quality programmes and qualifications that can be trusted and are attractive to employers.**

In the case of micro-credentials developed by NPO/NGO organizations, the opportunity to become accredited through a government agency would likely raise the profile of that credential substantially to the benefit of the NPO/NGO and its graduates. Government developments of NQFs and accreditation agencies vary widely between countries, and each has its strengths and weaknesses.

2.8.1 Strengths and weaknesses of government accreditation systems and services

Government agencies typically provide accreditation services that can secure the quality and credibility of credentials across all levels of the education system as well as the portability and transferability of credits to enhance employability.

Systems of accreditation that assure programme quality include professional bodies, government agencies, regional bodies and the private sector, and can include for profit and NPO sources.

At the same time, applying for accreditation through government may be challenging: providers may struggle to obtain official recognition for their programmes; the accreditation process may be onerous; regulatory frameworks and accreditation requirements may slow progress; government agencies may prioritize traditional education and training programmes or prioritize accreditation for programmes that align with national labour market needs; and government may be short of expertise or capacity while stakeholders may hold negative perceptions of the value or relevance of government accreditation.

Acknowledging these challenges for linking micro-credentials developed explicitly for local youth employability by NGO/NPO agencies, it is appropriate to direct attention to concurrent continental and regional developments that involve supporting national systemic development in the field.

© UNICEF/UN0391485/Siakachoma/OutSet Media

---

13   https://acqf.africa/resources/micro-credentials/acqf-support-debate-and-information-on-micro-credentials-concepts-policies-experiences

2.8.2 Continental and regional developments

The African Continental Qualifications Framework (ACQF) was launched with a vision of inclusiveness covering all types of learning and levels of qualifications, openness to stakeholders' needs and being innovation-ready (ACQF, 2023); it is intended to complement qualification framework development work at national and regional levels, which would include working towards making qualifications more comparable and transparent as well as improving their quality (Castel-Branco et al., 2022).

Key informants in this study were aware of and had participated in the peer learning webinars and training offered by the ACQF. It is also noted that a number of countries are adopting legislation relating to NQFs and their implementation or reviewing their existing NQFs (Castel-Branco et al., 2022). Burundi, Uganda and South Africa are respectively members of the East African Qualifications Framework for Higher Education (EAQFHE), which includes East African Community (EAC) member states, and of the Southern African Development Community Qualification Framework (SADCQF) initiated in 2017.

Continental patterns of progress in micro-credential development supported by government are more prominent in the higher education sector. In this context, youth would be interested in micro-credentials recognised by the national qualification authority as credits towards a formal qualification – perhaps even more so than government recognition of employment-driven qualifications without links to post school education.

Discussion on how to incorporate private credential initiatives has raised consideration as to whether such credentials might rather be allocated alternative recognition opportunities to incorporation in a national NQF and to how employers might be involved in such a process (Mashininga, 2023). An important challenge is resource availability in NQF bureaucracy for development work outside of the formal education domain. Further investigation into the capacity of national credentialing and NQF systems would be needed to assess whether national systems have progressed and are equipped to take on the development of non-formal credentials offered by NGOs/NPOs and some private providers.

© UNICEF/UNI297262/Schermbrucker

2.8.3 Links into national credentialing systems

In developing or expanding accreditation systems, a critical dimension is the vertical link between micro-credential offerings from local training institutions up into an overarching national credential framework. This can occur through a regional or local presence or officer whose role is to facilitate micro-credential developments among providers. **If local micro-credential training providers can access accreditation processes, quality assured programmes that are accredited widen the scope of skills development opportunities for young people.** At the same time, skills recognition actions take place in locations such as training facilities and employers' workshops and offices, demonstrating the importance of understanding the various levels within an ecosystem perspective.

Context influences how education and training systems articulate with the accreditation system to support access to the labour market and the mobility of social groups, especially marginalized youth from all areas of the country, including rural and urban contexts.

While a credential can increase the employment chances of a work seeker, their chances are substantially increased if they have been able to access work opportunities.

Moreover, the credibility of the micro-credential from the employer's point of view is important. In some instances, accreditation may be based on an arrangement between the agency that provides the learning programme and a single business owner or an employer association that might facilitate employment with several employers. However, this type of arrangement falls short of wider validity and recognition brought through links into a national accreditation system. A preferable arrangement would be for a learning programme to be accredited and more widely recognised through its positioning in the national accreditation system.

The themes set out above explicitly acknowledge a tiered approach. For example, the recognition and accreditation of non-formal skills and how this route to credentials needs to be integrated firmly within emerging and existing systems, both horizontally and vertically, is emphasized. This reflects a strong concern to connect young people's skills and their aspirations into a working accreditation framework.

2.8.4 Private sector and informal sources of credential accreditation

Supportive conditions that need to come together for young people to achieve their goal of gaining a reputable accreditation are highlighted above. This means looking not only at national accreditation systems (considering a broader regional perspective) but also focusing on the local level continuum.

This involves understanding the connections between young individuals, NGOs/NPOs, public micro-credential accreditation providers, employers, the community and others. In parallel, there are conditions emerging for forming connections between local micro-credential projects within a country and global platform that offer accreditations and services to local micro-credential providers. There are also connections forming between providers and public funding agencies and accreditation structures. These conditions are seen to be evolving in the projects discussed in this report.

2.8.5 International accreditation

In the private sector space, it is clear that **growing use is being made of international accreditation through programmes developed by Microsoft, Cisco, Adobe and many other software providers. Many of these programmes are well-regarded and enhance employability (even careers) in the IT industry. Further, these qualifications have strong international recognition and can open doors to international opportunities.** However, the global vendors tend to generate knowledge related to specific technologies or products rather than open-source options, which clearly results in some restrictions.

Nevertheless, these programmes provide a shared software language that has a strong presence in many environments, both rural and urban. The discussion will show how these programmes are implemented by non-profit platforms and are accessible in several African countries.

2.8.6 Informal arrangements – a localized horizontal approach

Informally arranged 'accreditation' brokered by a provider – such as an NGO/NPO – can work for employers and work seekers and may be effective in establishing the reputation and credibility of training providers within their local communities and industries. Training providers can also establish partnerships with local employers to create job placement opportunities for their graduates. **Through provider-employer partnerships and by demonstrating the quality of their training and the skills of their graduates and being able to customise training programmes to take account of business processes and goals, training providers can convince employers to hire their students.** A challenge that may arise is finding alternative sources of funding if government channels are excluded.
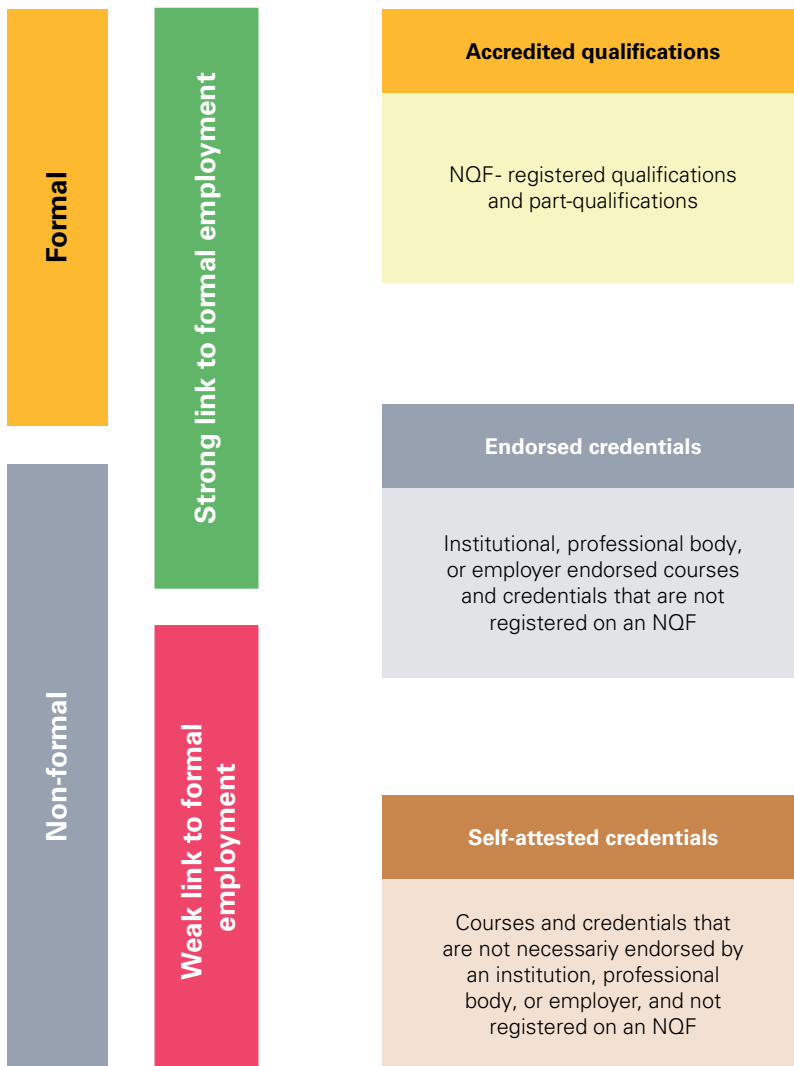
© UNICEF/UN0306502/Abdul

2.8.7 Endorsed and self-attested credentials

In Burundi, Uganda and South Africa, large proportions of youth are employed in those countries' informal economies. In South Africa, private and public institutions supply formal and non-formal micro-credentials for the South African labour market. A similar pattern is likely to emerge in Burundi and Uganda. With this in mind, the relatively more developed South African case is examined below to gauge the likely path of micro-credential development in Burundi and Uganda. The discussion focuses particularly on the role of micro-credentials in facilitating pathways for unemployed youth into employment in the formal *or* the informal economies.

The figure opposite depicts how formal and non-formal micro-credentials are offered by private providers. In some cases, micro-credentials are designed in partnership with or are negotiated with the employers involved. Young people who obtain these accreditations tend to have a high job placement rate with partner employers or with other firms in the same sector with similar skills needs.

Informally attained micro-credentials can receive either 'endorsed' or self-attested' validation. An endorsed credential means that an external party (such as an employer) has endorsed or recognized a credential that has been obtained. A credential that is self-attested means that the credential's validity is confirmed only by the individual who obtained it. Neither of these credentials is registered on an NQF.

Figure 2:
Pattern of micro-credential accreditation in South Africa

Formal — Strong link to formal employment

Accredited qualifications

NQF- registered qualifications and part-qualifications

Endorsed credentials

Institutional, professional body, or employer endorsed courses and credentials that are not registered on an NQF

Non-formal — Weak link to formal employment

Self-attested credentials

Courses and credentials that are not necessariy endorsed by an institution, professional body, or employer, and not registered on an NQF

2.8.8 Patterns of accreditation identified among micro-credential providers in South Africa

In South Africa, an NPO Afrika Tikkun[14] is a skills and training provider that engaged with employers to develop micro-credentials in agricultural and digital skills. The advantage that Afrika Tikkun has leveraged is having its micro-credentials accredited by the South African public authority, the Quality Council for Trades and Occupations (QCTO). The employment link with partner employers is strong, although wider acceptance of the credentials among other employers remains to be seen. The Afrika Tikkun accreditation could be regarded as the silver standard as these micro-credentials are endorsed by the relevant national authority.

The following example involves an NQF Level 8 Green Learning to Earning programme relating to wetlands rehabilitation offered by Rhodes University jointly with the Wetlands Assessment Centre. Importantly, the course is accredited by the South African Council for Natural Scientific Professions (SACNASP), a professional statutory body whose members may be well-disposed to hiring holders of this accreditation, which could gain wider acceptance within a network of organizations in the green industry sector. This accreditation, although endorsed, is given a bronze standard as it does not carry the endorsement of a public authority such as the QCTO.

Accreditation of learning programmes includes globally accredited courses such as software programming qualifications offered by Microsoft and other international online vendors. An example of such accreditation is the training implemented in Uganda by the South African-based technology and software programming NPO, Umuzi[15]. Refactory, a 'software skilling academy'[16] in Uganda is also accredited to provide such credentials by the Uganda government's Directorate of Industrial Training (DIT). International accreditation provides the option to work online for a greater variety of

employers or to migrate internationally, although in the Umuzi example, the Ugandan students were employed by a local business.

These examples give an indication of the different options open to providers to gain accreditation for their programmes. They provide evidence of the growing maturity of and diversification in alternative accreditation routes, particularly in South Africa. To the knowledge of the country researchers in this study, the accreditation environments in Burundi and Uganda are making progress in this area, making it important for skills providers to network with a view to securing agreements directly with employers.

2.8.9 'Credential fluency' – future prospects for micro-credentials to be linked into more flexible learning pathways

Despite the challenges described above, micro-credentials are increasingly promoted as a more flexible way of recognizing knowledge, skills and competencies. They give learners, students, jobseekers and employees the ability to collect and combine smaller units of learning according to their specific needs and, as such, are often seen as facilitating lifelong and life-wide learning (UNESCO, 2021).

We have drawn on the concept of *credential fluency*, which is new, and, one could argue, untested in its application. Importantly, this concept is tied directly to the notion of micro-credentials combining with other credential forms to form flexible learning pathways.

UNESCO (2022, p. 3) has defined the term **credential fluency as 'The increasingly seamless interrelationships between the recognition of formal, non-formal and informal lifelong learning made possible through a user-centric approach, digital forms of recognition, improved data interoperability, and closer alignment between learning and the world of work'**.

---

14   https://afrikatikkun.org/

15   https://www.umuzi.org/overview

16   https://refactory.academy/

According to Chakroun and Keevy (2023, p. 106-107), 'Credential fluency can refer to improved continuity, smoothness, and rates of flow through 'distributed credentialing systems involving different learning spaces, actors and stakeholders' and 'intersection of credentialing and digital technology' so that workers can 'follow complex trajectories over their working life' (Chakroun & Keevy 2023, p. 106-107). In the present global environment, credential fluency is clearly expanding but tends to be concentrated in the high- to middle-income countries, with more limited access in low-income countries.

Credential fluency would be optimal where most of the following conditions apply:

▶ A concentrated labour market where jobs and workers are in close proximity;

▶ Low unemployment;

▶ Easy access to industry and occupation relevant education and training, online and face-to-face (f2f);

▶ A well-functioning and responsive qualification framework and credentialing processes;

▶ High awareness of and trust in online and f2f credentials; and

▶ The majority of employment being in the formal sector.

The contribution of micro-credentials in these environment leads to the evolution of advanced ecosystems that are increasingly flexible and diverse. This is a future credentialing environment that will likely emerge in ESA countries.

© UNICEF/UN0603828/Tibaweswa

2.9

Prioritise importance of generating and using empirical data to support decision making

The OECD launched a *Micro-credential Implementation Project* (OECD, 2021) which considered the social inclusion of disadvantaged workers and learners and emphasized the need to open pathways from upper secondary education to higher education. ESA countries, including Burundi, Uganda and South Africa, would, in addition, prioritize the role of micro-credentials in enhancing employment prospects of unemployed school-leavers and completers.

The OECD concluded:

> **Considering the relative novelty and growing use of micro-credentials, evidence of their value and impact is still scarce. Given the limited evidence available on the efficacy of micro-credentials, researchers and policymakers should be very cautious in drawing conclusions on what makes micro-credentials work and what does not**

(OECD 2021, p. 3).

A scarcity of evidence on the contribution of micro-credentials is attributed to factors such as a lack of programme tracking so investigation or corroboration of micro-credentials' impact or efficiency cannot be properly done. In the ESA context, similar caution may be warranted as micro-credential projects included in this study are themselves at an early stage in their evolution. However, this does not preclude the importance in a project of collecting data to improve project effectiveness and efficiency. At a project level, there is good reason to collect and use data, especially from daily operations.

Monitoring and evaluation (M&E), data gathering and empirical research in the process of project implementation can greatly assist in understanding the effectiveness and efficiency of a programme. The projects studied seem to vary in their application of these tools. Although financial M&E and research can present challenges, the approaches are useful for more closely assessing the relative contributions of credentialing projects to practical improvements. Similarly, **gathering information on students' perceptions of their own employability as they move into the labour market would reveal useful information about the value of such projects**.

The following M&E approaches could be considered:

▶ Survey graduates and employers to assess the skills and knowledge gained in a micro-credential programme, and if the micro-credential played a role in increasing employability of graduates or not or conduct in-depth interviews or focus group discussions with graduates and employers;

▶ Conduct pre- and post-training assessments to measure changes in graduates' skills;

▶ Do a cost-effectiveness/cost-benefit analysis of the impact of a programme based on measuring students' employability and career advancement; and

▶ Assess a beneficiary's employability as perceived by participants/beneficiaries and employers.

© UNICEF/UNI297257/Schermbrucker

Section 3

Roadmap to guide developers of micro-credentials in Eastern and Southern Africa

In many low- and middle-income countries, addressing youth unemployment is a critical challenge that requires innovative and targeted interventions. Micro-credentials offer a promising path to skills development by providing individuals with tangible recognition of their competencies and increasing likelihood of employment in a fast-evolving job market.

Developing an effective micro-credential programme for training unemployed youth requires careful consideration of various factors to ensure relevance, accessibility and access to work-based learning or employment. This framework aims to guide skills training practitioners in LMICs and similar contexts through a process of developing micro-credentials that will be tailored to the needs of an identified group of unemployed youth.

By addressing a series of key questions, practitioners will be able to systematically identify and address the challenges and opportunities associated with developing a micro-credential. **From understanding local socio-economic dynamics, to designing accessible and engaging training programmes, this framework provides a comprehensive roadmap for practitioners to navigate the complexities of designing a skills development programme using micro-credentials in low-income settings.**

Important first points to consider on your journey to develop your micro-credential programme

1. What are the specific needs and aspirations of unemployed youth in your country/ your locality, and how can micro-credentials address these needs effectively?

2. What are the priority industries or sectors in this country's economy, and how can micro-credentials be aligned with labour market demand?

3. How can micro-credentials be designed to be accessible and inclusive, considering factors such as language, literacy levels and digital infrastructure?

4. What pedagogical approaches and learning methodologies are most suitable for engaging and empowering unemployed youth in skills training?

5. How can partnerships with local stakeholders, including government agencies, employers, and civil society organizations, enhance the relevance and impact of micro-credential programmes?

6. What mechanisms can be put in place to ensure the quality assurance and recognition of micro-credentials within the country's education and training system?

7. How can monitoring, evaluation and feedback mechanisms be integrated into micro-credential programmes to measure outcomes and inform continuous improvement?

By addressing these questions systematically, skills training practitioners can develop micro-credentials that not only equip unemployed youth with relevant skills but also contribute to broader socio-economic development goals in their countries and beyond.

The roadmap that follows is intended help you as you as a plan and develop your strategy towards your goal of launching a micro-credential. It is written as a guide to provide a sense of direction through the steps and towards achieving your micro-credential that can be shared with a team.

It can help your planning and thinking about the steps, resources and timeline of priorities, objectives, and actions. It makes tracking progress easier and allows for flexibility as you go along. Your roadmap can become a source of inspiration and motivation towards achieving your goal.

Roadmap supporting micro-credential implementation in Eastern and Southern Africa

Table 5:

Summary of activities

	Summary of activities
1.	Conduct due diligence by obtaining key information to support planning
2.	Define the curriculum orientation (e.g. entrepreneurial, job specific, transferable or hybrid)
3.	Specify curriculum design (e.g. scope, instructional strategy, assessment etc.
4.	Select the modality of curriculum delivery (e.g. f2f, online, blended)
5.	Decide on the approach to accreditation of micro-credential (e.g., formal or informal)
6.	Network and infrastructure (e.g., identify digital infrastructure needed for programme)
7.	Budgeting (e.g., fund raising and budgeting of income and expenditures)
8.	Pilot programme (e.g., controlled opportunity to learn about and improve your programme)
9.	Implementation of full programme (Activities 1-8 above prepare you for this)
10.	In-programme work exposure arranged for students (involving networking with employers)
11.	Post-completion employment arrangements for students (involves networking with employers)
12.	Monitoring and evaluation (Ongoing)

Table 6:

Description of key activities

Key Activity	Description
1. Conduct due diligence by obtaining key information to support planning	This involves gathering essential information to inform the planning process. Key aspects include: ▶ identifying unemployed youth demand and migration trends ▶ identifying the micro-credential model or designing one ▶ understanding employer networks ▶ assessing employer buy-in ▶ identifying learner demographics and needs ▶ identifying government social programmes related to supporting households and unemployed individuals. This activity is crucial for ensuring that the micro-credential programme is tailored to the specific needs and circumstances of the target population.
2. Define the curriculum orientation	The curriculum orientation determines the focus of the micro-credential programme. It may emphasize: ▶ entrepreneurial skills ▶ transferable skills ▶ occupational-specific skills or offer ▶ a hybrid approach Understanding the skills focus is essential for aligning the curriculum with the needs of both learners and the job market.
3. Specify curriculum design	Curriculum design encompasses various features such as the curriculum: ▶ scope, skills covered, content, sequence ▶ alignment with standards ▶ instructional strategy ▶ assessments scheduled ▶ evaluation ▶ outcomes in completion and employment achieved This activity ensures that the curriculum is well-structured, coherent, and aligned with the learning objectives and industry standards.
4. Define modality of curriculum delivery	This refers to the mode of delivering the curriculum, including: ▶ online ▶ f2f, or ▶ blended modalities Choosing the appropriate delivery modality is essential for ensuring accessibility, flexibility and effectiveness of the programme.

Key Activity	Description
5. Determine accreditation/ credibility	This involves determining the source of accreditation or external credibility for the micro-credential. Options include: ▶ issuing paper certificates or badges ▶ negotiating recognition with local employers or associations ▶ accreditation through utilising a private sector accreditation, or ▶ seeking government accreditation Accreditation adds credibility and value to the micro-credential, enhancing its recognition and acceptance by employers and other stakeholders.
6. Network & infrastructure factors	Understanding online factors involves assessing opportunities and barriers to entry related to: ▶ ICT/online access ▶ electricity access ▶ online experience, and ▶ familiarity with and readiness of youth for online learning Addressing these factors is crucial for ensuring equitable access to the programme and maximizing the effectiveness of online delivery.
7. Budgeting	Budgeting and costing to ensure the sustainability of the micro-credential programme involves: ▶ estimating the financial resources required for programme implementation and ongoing operation ▶ includes personnel costs, materials, facilities, technology, marketing and administrative expenses ▶ provides for effective resource allocation, financial planning and risk management and facilitates financial accountability and transparency Budgeting enables identifying potential funding gaps, alternative revenue streams, and strategy for sustainability over project duration.
8. Pilot programme	Conducting a pilot programme: ▶ enables testing the feasibility and effectiveness of the micro-credential programme on a smaller scale before full implementation. ▶ helps identify and address potential challenges Opportunity to refine the programme design and delivery based on feedback and lessons learned.
9. Implementation of programme	Implementing the programme involves various aspects such as: ▶ learner recruitment and selection ▶ programme size and complexity ▶ status of micro-credential development ▶ preparation of job search documentation and ▶ financing Effective implementation requires careful planning, coordination, and allocation of resources to ensure the programme's success and sustainability.

Key Activity	Description
10. In-programme work exposure arranged	Providing work exposure opportunities during the programme: ▶ allows learners to gain practical experience and apply their skills in real-world settings Arranging work exposure with local employers: ▶ enhances employability and facilitates smooth transition to the workforce upon programme completion
11. Post-completion employment arrangements	Post-completion employment arrangements may involve: ▶ provider equips graduate with a reference ▶ graduate seeks employment independently through own networks ▶ provider negotiates individual/group employment contracts with an employer This activity is aimed to facilitate successful transition to sustainable employment and maximize the programme's impact on participants' livelihoods.
12. Monitoring and evaluation	Monitoring and evaluation (M&E) activities may involve: ▶ tracking learner progress and performance ▶ tracking learning progress at instructional unit level ▶ monitoring programme progress and quality ▶ assessing outcomes, and ▶ identifying areas for improvement Establishing internal record-keeping mechanisms and defining the form of M&E ensure accountability, learning and continuous improvement through the programme lifecycle.

© UNICEF/UN0372602/Grile

Table 7:

Developmental themes to improve the quality and impact of the programme

For optimal impact, a micro-credential program must prioritize stakeholder collaboration, community engagement, equity, responsiveness, and sustainability beyond project duration.

Areas	Activities
Stakeholder collaboration	Establishing links with stakeholders and partners, especially local employers, businesses, training providers in the field and relevant government service providers.
Community engagement	Involving local communities to ensure that the micro-credential programme is culturally relevant and responsive to parent and youth needs, understanding the meaning of work in the household context.
Equity and inclusion	Addressing equity and inclusion considerations to ensure the micro-credential is accessible and beneficial, including for marginalized groups such as women, refugees, persons with disabilities and other vulnerable populations. This may involve designing inclusive recruitment strategies, providing targeted support services and creating a supportive learning environment for all participants.
Responsiveness and flexibility	Though challenging, programmes need to demonstrate responsiveness that involves being open to feedback and adapting to changing circumstances. This means flexibility for iterative learning through the programme lifecycle.
Extending the programme beyond the project duration	This may involve taking up opportunities to institutionalize the micro-credential programme, for instance by bridging into existing skills development and vocational structures which will benefit from securing local ownership and direction.

Table 8:

Overarching principles to be taken into consideration when a programme opts to transition from face to face to online or blended learning

Areas	Activities
Technology integration	Ensure integration of technology tools and platforms for content delivery, interaction and assessment.
Pedagogical adaptation	Adapt instructional methods and materials to suit the online/ blended learning environment and maintain effectiveness.
Student support	Provide support services and resources for online learners, such as technical assistance, tutoring and academic advice.
Accessibility and inclusivity	Address accessibility barriers and ensure that the online/blended programme is accessible to learners with diverse needs or backgrounds.
Quality assurance	Implement monitoring, evaluation, and continuous improvement to maintain the quality and effectiveness of the programme.

Converting a face-to-face micro-credential programme to an online or blended format is best achieved by following a thorough process. It starts by assessing the current programme design and learner needs, then redesigning the curriculum and integrating technology infrastructure. Instructional design and pedagogical approaches are reshaped, followed by training and support for teaching staff. Then student support services are curated, and assessment methods are developed to ensure accessibility, inclusivity and continuous improvement through quality assurance measures.

Through careful planning the timing and duration of the transition may be scheduled to reduce disruption of planned training. Plans for raising funds, and financing this transition need to be taken up as early as possible.

Table 9:

Overview of a method to convert from a F2F programme to online or blended mode

Areas	Activities
Assess the current programme design	Identify components that can be adapted for online or blended delivery and areas that may require modification.
Assess learner needs and profile	Conduct a needs assessment to capture needs, preferences and household constraints such as learners' access to technology, internet connectivity and prior experience with online learning.
Redesign curriculum and adapt as required	Determine which parts of the curriculum can be effectively delivered in online/blended format. Redesign learning activities, assessments, and materials accordingly. Maintain alignment with core learning objectives and standards.
Design, augment and integrate technology infrastructure	Identify and select appropriate technology platforms, learning management system (LMSs) and applications for delivering content, enabling interaction, and harvesting data to assess learning outcomes. Ensure standards for device compatibility, internet bandwidth and technical support.
Develop and/or reshape instructional design and pedagogical approach	Develop online quality learning materials/resources (e.g., engaging for active learning, interactive, support or feedback for self-directed learning).
Implement training and support for instructors	Train and support teachers in transitioning from their accustomed mode – from f2f teaching to online or blended instruction. Equip instructors with necessary skills, tools, and strategies for managing virtual classrooms and assessing learner progress.
Curate and develop student support services	Establish support services for online learning that include technical assistance, tutoring and advice to improve success of learners.
Develop applicable assessment and evaluation	Develop assessment strategies and tools that are suitable for online or blended delivery as well as monitor learner progress in order to give feedback and evaluate effectiveness of the modality in place.
Ensure accessibility and inclusivity	Ensure the programme is accessible to learners with diverse needs by including language assistance and raising technological literacy. Ensure inclusivity through equal access to learning opportunities for all learners.
Embed quality assurance and continuous Improvement	Establish relevant quality assurance, ongoing evaluation and continuous improvement of the programme. Collect feedback from learners, instructors and stakeholders to identify areas for improvement.

References

ACQF. 2021. *Towards the African Continental Qualifications Framework. Mapping report.* Turin/Addis Ababa: European Training Foundation and Deutsche Gesellschaft für Internationale Zusammenarbeit. https://acqf.africa/resources/mapping-study/acqf-mapping-report-comprehensive

Alfonsi, L., Bandiera, O., Bassi, V., Burgess, R., Rasul, I., Sulaiman, M. & Vitali, A. (2020). Tackling youth unemployment: evidence from a labor market experiment in Uganda. *Econometrica*, Vol. 88, No. 6 (November, 2020), 2369–2414. https://onlinelibrary.wiley.com/doi/pdf/10.3982/ECTA15959

Attanasio, O., Kugler, A. and Meghir, C. (2011). Effects of Youth Training in Developing Countries: Evidence from a Randomized Training Programme in Colombia. *American Economic Journal: Applied Economics, 3.* 188–220. https://www.povertyactionlab.org/sites/default/files/research-paper/472%20-%20training%20disadvantaged%20youth%20in%20Colombia%20July2011%20AEA.pdf

Bozkurt, A. & Brown, M. (2022). Micro-credentials: Stackable, Combinable, or Transferable Qualifications. *EdTechnica: The Open Encyclopedia of Educational Technology.* https://edtechbooks.org/encyclopedia/micro-credentials

Brookings. (2022). *Learning and working in the digital age: Advancing opportunities and identifying the risks.* Annelies Goger, Allyson Parco, and Emiliana Vegas. https://www.brookings.edu/research/learning-and-working-in-the-digital-age-advancing-opportunities-and-identifying-the-risks/

Brown, M., and 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., Mhichíl, M., Beirne, E., and Mac Lochlainn, C. (2021a). The global micro-credentials landscape: Charting a new credential ecology for lifelong learning. *Journal for Learning Development*, 8(2), 228–254. https://jl4d.org/index.php/ejl4d/article/view/525

Brown, M., Nic Giolla Mhichíl, M., Beirne, E., and Mac Lochlainn, C. (2021b). *State-of-the-art literature review on micro-credentials: A report for the European Commission.* https://ni4dl.files.wordpress.com/2022/09/mc-final-draft-literature-review-2021.pdf

Brown, M. & Nic-Giolla-Mhichil, M. (2022). Unboxing micro-credentials: an inside, upside and downside view. *Culture and Education.* https://doi.org/10.1080/11356405.2022.2102293

Buchanan J., Allais S., Anderson M., Calvo R. A., Peter S., & Pietsch T. (2020). *The futures of work: What education can and can't do.* Paper commissioned for the UNESCO Futures of Education report. https://unesdoc.unesco.org/ark:/48223/pf0000374435

Carton, M. Mellet, A. (2021) The education, training and decent work Continuum Opportunities for transformative perspectives for inclusion; Initial evidence from the field: examples from five Swiss development cooperation projects, September 2021 NORRAG. https://resources.norrag.org/resource/658/the-education-training-and-decent-work-continuum-opportunities-for-transformative-perspectives-for-inclusion

Castel-Branco, E., Jaftha, C., Mukhwana, E.J., Allgoo, K. & Jeffy Mukora, J. (2022). *ACQF policy document.* https://acqf.africa/resources/policy-guidelines/acqf-policy-document-upon-validation-by-au-member-states-en-fr-pt/acqf-policy-document-en/@@display-file/file/ACQF%20Policy%20document_for%20validation%20process_17Nov2022_EN_WEB.pdf

CEDEFOP. (2022). *Briefing Note: Are micro-credentials Becoming a Big Deal?* https://www.CEDEFOP.europa.eu/files/9171_en.pdf

CEDEFOP. (2023). *Micro-credentials for labour market education and training. Micro-credentials and evolving qualifications systems.* Luxembourg: Publications Office of the European Union, 2023. https://www.cedefop.europa.eu/en/publications/5589

CEDEFOP. (2024). *Microcredentials: striving to combine credibility and agility.* Briefing note, January 2024. https://www.cedefop.europa.eu/files/9192_en.pdf

Chakroun, B, & Keevy, J. (2018). *Digital credentialing: implications for the recognition of learning across borders.* Paris: UNESCO. https://www.google.com/url?q=https://unesdoc.unesco.org/ark:/48223/pf0000264428&sa=D&source=docs&ust=16852721675111122&usg=AOvVaw0xOYC5WiEzYN2b5kNNv0cP

Chakroun, B. & Keevy, J. (2023). The Evolution of Credentials: A Call to Action to Rethink the Education–Training–Work Continuum. In: C*arton, M. & Hoffmann,C. (eds.)The Education-Training-Work Continuums: Pathways to Socio-Professional Inclusion for Youth and Adults NORRAG & ILO.* https://resources.norrag.org/resource/779/the-education-training-work-continuums-pathways-to-socio-professional-inclusion-for-youth-and-adults

digiTAL. (2023). International Conference on Teaching, Assessment and Learning in the Digital Age. Cape Town, 6-17 December 2023. Conference Proceedings. https://icdigital.org.za/

European Commission. (2020). *A European approach to micro-credentials: Output of the Higher Education Micro-credentials Consultation Group.* Final report. https://ec.europa.eu/education/sites/default/files/document-library-docs/europeanapproach-micro-credentials-higher-education-consultation-group-output-final-report.pdf

European Training Foundation. (2022a). *Guide to design, issue and recognise micro-credentials.* Turin: ETF. https://www.etf.europa.eu/sites/default/files/2023-05/Microcredential%20Guidelines%20Final%20Delivery.pdf

European Training Foundation. (2022b). Guidelines for the recognition of micro-credentials. Draft structure and content. Consultation slides, 9 November 2022. https://emc.eadtu.eu/images/EMC_Common_Micro-credentials_Framework_.pdf

European Training Foundation. (2023). Procurement procedure: ETF2023OP0009. ACQF Qualifications and Credentials Platform. Unpublished.

ILO. (2020a). *The Digitization of TVET and Skills Systems*. Geneva: ILO. https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_752213.pdf

ILO. (2020b). Report on employment in Africa (Re-Africa) Tackling the youth employment challenge. Geneva: ILO. https://www.ilo.org/wcmsp5/groups/public/---africa/---ro-abidjan/documents/publication/wcms_753300.pdf

ILO. (2021). Shaping skills and lifelong learning for the future of work. International Labour Conference 109th Session, 2021. https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_813696.pdf

ILO. (2022). *Future of Work, Emerging Sectors and the Potential for Transition to Formality*. Geneva: ILO. https://www.ilo.org/employment/units/emp-invest/informal-economy/WCMS_855420/lang--en/index.htm

ILO & UNHCR. (2023). Comparative Skills Profiling Surveys and Assessment of Skills Recognition Opportunities Facilitating Refugees and Asylum Seekers' Access to the Labour Market in South Africa and Zambia. Geneva: ILO. https://www.sammproject.org/samm-resources/comparative-skills-profiling-surveys-and-assessment-of-skills-recognition-opportunities-facilitating-refugees-and-asylum-seekers-access-to-the-labour-market-in-south-africa-and-zambia/

ILO & UNICEF. (2023). Global research on the labour market value of micro-credentials with a focus on youth employment. Forthcoming.

Kadigi, R. (2022) Trade, GDP value adding activities and income inequality in the EastAfrican community. PLOS Sustain Transform, 1(12). https://doi.org/10.1371/journal.pstr.0000036

Kato, S., Galán-Muro, V. and Weko, T. (2020). *The Emergence of Alternative Credentials*. OECD Education Working Paper No. 216. https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=EDU/WKP(2020)4&docLanguage=En

Keevy, J., Shiohira, K., Molokwane, P., & Vally, Z. (2023). Background paper for 'Building Better TVET Systems: Improving the assessment and certification of competences in TVET. World Bank, UNESCO & ILO'. https://www.worldbank.org/en/topic/skillsdevelopment/publication/better-technical-vocational-education-training-TVET

Kumar, J., Richard, R., Osman, S. & Lowrence, K. (2022). Micro-credentials in leveraging emergency remote teaching: the relationship between novice users' insights and identity in Malaysia. *International Journal of Educational Technology in Higher Education*, (2002) 19:18.

Lucas, B. and Venckutė, M. (2020). Creativity – a transversal skill for lifelong learning. An overview of existing concepts and practices, Kampylis, P. and Cachia, R. editor(s), EUR 30405 EN, Publications Office of the European Union, Luxembourg. https://publications.jrc.ec.europa.eu/repository/handle/JRC121862

Malaysian Qualifications Agency. (2020). *Guidelines to Good Practices: Micro-credentials*. Selangor: MQA. https://www2.mqa.gov.my/qad/v2/garispanduan/2020/GGP%20Micro-credentials%20July%202020.pdf

Mashininga, K. (2023) Regional framework for micro-credentials to be developed 31 March 2023. https://www.universityworldnews.com/post.php?story=20230330092421940

McGrath, S., & Russon, J. A. (2023). Towards Sustainable Vocational Education and Training: Thinking beyond the formal. *Southern African Journal of Environmental Education*, *39*. https://www.ajol.info/index.php/sajee/article/view/248147

Mhichíl, M. Oliver, B., Lochlainn, C. & Brown, M. (2023). A snapshot in time: the next new normal and micro-credentials. *International Journal of Educational Technology in Higher Education*. https://educationaltechnologyjournal.springeropen.com/articles/10.1186/s41239-023-00409-2

Mullan, J. & Broadbent, E., (2021). Unlocking the Power of Digital Technologies to Support' Learning to Earning' for Displaced Youth. *UNICEF*. https://files.eric.ed.gov/fulltext/ED627529.pdf

Nakata, S., Sharma, U., Rahman, T., Rahman, M. and Aziz, M. (2021). *Effects of Recognition of Prior Learning on Job Market Outcomes: Impact Evaluation in Bangladesh*. Policy Research Working Paper 9644. World Bank Group. https://openknowledge.worldbank.org/bitstream/handle/10986/35522/Effects-of-Recognition-of-Prior-Learning-on-Job-Market-Outcomes-Impact-Evaluation-in-Bangladesh.pdf?sequence=1

Ndebele, N. and Ndlovu, J. (2019). Employment experiences of post graduate students in KwaZulu-Natal: An intersection of qualifications and employability in the labour market. *South African Journal of Higher Education*. https://www.journals.ac.za/index.php/sajhe/article/view/2802

NCVET (India). (2022). *Guidelines for micro-credentials*. https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Micro%20Credentials%20.pdf

Nuffic. (2022). *The rise and recognition of micro-credentials: Stacking modules and the future of the qualification.* https://www.nuffic.nl/sites/default/files/2022-03/The%20rise%20and%20recognition%20of%20micro-credentials.pdf

OECD. (2021). Quality and value of micro-credentials in higher education: Preparing for the future. *OECD Education Policy Perspectives*, no. 40. Paris. https://www.oecd-ilibrary.org/education/quality-and-value-of-micro-credentials-in-higher-education_9c4ad26d-en

OECD. (2023). Micro-credential policy implementation in Finland, the Slovak Republic, Slovenia and Spain. *OECD Education Policy Perspectives.* https://search.oecd.org/publications/micro-credential-policy-implementation-in-finland-the-slovak-republic-slovenia-and-spain-c3daa488-en.htm

Pawilen, T. Tomida E. & Eugenioc, D. (2023). Proposed Typology and Inter-university Collaboration Model for Designing and Implementing Micro-credentials in Japan and the Philippines. *International Journal of Curriculum and Instruction,* 15(3), (2023), pp. 1692-1715. https://ijci.globets.org/index.php/IJCI/article/view/1372

Perla, L., Vinci, V., & Scarinci, A. (2023). Innovating university teaching with micro-credentials: an ongoing research experimentation. *Research on Education and Media*, 15(1), 72-79. https://www.researchgate.net/publication/367510642_Innovating_university_teaching_with_micro-credentials_an_ongoing_research_experimentation

Pouliou, A. (2022). Micro-credentials – a new opportunity for lifelong learning? Interim findings from CEDEFOP project on micro-credentials for VET and labour market learning. Presentation at the Joint ACVT/DGVT webinar in January 2022. https://www.CEDEFOP.europa.eu/files/micro-credentials_acvt_dgvt_meeting_apouliou_240122_0.pdf

Sellers, J., Nasir, B., & Cooper, R. (2021). From Learning to Earning: Alternative Credentials and Youth Employment. United Nations Children's Fund (UNICEF). https://blogs.unicef.org/evidence-for-action/from-learning-to-earning-alternative-credentials-and-youth-employment/

Singh, M. (2012) UNESCO Guidelines for the Recognition, Validation and Accreditation of the Outcomes of Non-formal and Informal Learning https://nordvux.net/portals/0/_dokumenter/2013/3_unesco.pdf

Tamoliune, G., Greenspon, R., Tereseviciene, M., Volungeviciene, A., Trepule, E,. & Dauksiene, E. (2023). Exploring the potential of micro-credentials: A systematic literature review. Published online, *Frontiers in Education*, 9 January 2023. https://www.frontiersin.org/articles/10.3389/feduc.2022.1006811/full

UNESCO. (2015). Transversal Skills in TVET: Policy Implications. *Asia-Pacific Education System Review Series* No. 8. https://unesdoc.unesco.org/ark:/48223/pf0000234738

UNESCO. (2021). A conversation starter: Towards a common definition of micro-credentials. Draft Preliminary Report. https://unesdoc.unesco.org/ark:/48223/pf0000381668

UNESCO. (2023). *Short courses, micro-credentials, and flexible learning pathways: A blueprint for policy development and action.* Policy paper prepared by Peter van Hijden and Michaela Martin. Paris: UNESCO. https://www.iiep.unesco.org/en/short-courses-micro-credentials-and-flexible-learning-pathways-blueprint-policy-development-and

UNICEF. (2019). *Global Framework on Transferable Skills.* New York: UNICEF. https://www.unicef.org/media/64751/file/Global-framework-on-transferable-skills-2019.pdf

UNICEF. (2021b). *Harnessing the power of technology and digital innovation for children.* United Nations Children's Fund (UNICEF). https://www.unicef.org/media/100211/file/DIGITAL%20UNICEF.pdf

UNICEF (2022) A Strategic Framework on Alternative Education for Out-of-school Adolescents in Latin America and the Caribbean https://www.unicef.org/lac/media/37706/file/Alternative%20Education%20Strategic%20Framework.pdf

Valentine, J. and Clay, J. (2019). *Non-degree Credentials Provide Value for Adults in the Labor Market.* DVP-PRAXIS. https://www.dvp-praxis.org/wp-content/uploads/2019/07/DVP-PRAXIS-Non-Degree-Credentials-and-Labor-Market-Outcomes.pdf

Vlasceanu, L., Grünberg, L. and Pârlea, D.(2007) Quality assurance and accreditation: a glossary of basic terms and definitions UNESCO European Centre for Higher Education. https://www.aracis.ro/wp-content/uploads/2019/08/Glossary_07_05_2007.pdf

Wheelahan, L. and Moodie, G. (2021). Gig qualifications for the gig economy: micro-credentials and the 'hungry mile. *Higher Education*. https://link.springer.com/article/10.1007/s10734-021-00742-3

Yang, J. (2015). Recognition, Validation and Accreditation of Non-formal and Informal Learning UNESCO /UIL. https://uil.unesco.org/lifelong-learning/recognition-validation-accreditation/recognition-validation-and-accreditation-non

Appendix A:

Summary of projects per country

Project	Burundi				Uganda				South Africa			
	UPSHIFT	**PAEEJ**	**CREOP - Jeune**	**World Vision**	**Uganda Youth Skills Training Organization (UYSTO)**	**Refactory**	**Empowering Dis- placed Communities**	**UPSHIFT**	**Life Skills and Citizenship Education (LSCE)**	**National Pathways Management Network (NPMN)**	**Africa Tikkun**	**Green Learning Pathways**
Funder	UNICEF	Ministry of Sports Youth and Culture	SPARK in- ternational NGO	Self- funded global	Partner- ship with Afrinvest (youth enterprise) Norway	NORAD[17] & other donors.	Norwegian Refugee Council	UNICEF	UNICEF	National Youth De- velopment Agency [18]	Multiple	Dept. Forestry, Fisheries & Environ- ment
Status	Interna- tional NGO/NPO	Govern- ment	NGO/NPO	Interna- tional NGO	NGO/NPO	NGO/NPO	Interna- tional NGO/NPO	Interna- tional NGO/NPO	Interna- tional NGO/NPO	Govern- ment	Non-Profit Company	Govern- ment Public Works Pro- gramme
Location	Rural	Rural	Urban- Rural	Urban- Rural	Urban- Rural	Urban	Rural	Rural	Rural	Online	Urban- rural	Urban- rural

---

17   Norwegian Agency for International Development

18   Presidential Youth Employment Intervention, South Africa

Project	Burundi				Uganda				South Africa			
	UPSHIFT	**PAEEJ**	**CREOP- Jeune**	**World Vision**	**Uganda Youth Skills Training Organization (UYSTO)**	**Refactory**	**Empowering Displaced Communities**	**UPSHIFT**	**Life Skills and Citizenship Education (LSCE)**	**National Pathways Management Network (NPMN)**	**Africa Tikkun**	**Green Learning Pathways**
Target group	Youth & children	Unemployed youth	Unemployed youth. Female learners	Youth (2 age ranges) with family)	Unemployed youth	Unemployed youth out of contracts	Young adult refugees	Marginalized youth (incl. displaced)	UNICEF learners	Unemployed youth	Multiple programmes	Expanded Public Work Programmes
Skills focus	Entrepreneurial and Transversal skills	Agricultural Sector	Skills for unemployment?	Individual personal growth (general)	Entrepreneurial	Tech Skills Gap	Self-employ & diversified livelihoods	Entrepreneurial/ Transversal	School curriculum driven	General skills of work seeking/	Retail, Hospitality, ICT, Agri-culture	Climate jobs programme, Green skills Pathways
Modality	F2F	F2F	F2F	F2F	F2F	Hybrid	F2F	F2F	F2F	Online	F2F	F2F
Micro-credential in progress	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Language	Code switching	French & code switching	French & code switching	French & code switching	English & code switching	English and code switching	Refugee languages and code switching	English & code switching	English	English	English	English & code switching

For every child

Whoever she is.
Wherever he lives.
Every child deserves a childhood.
A future.
A fair chance.
That's why UNICEF is there.
For each and every child.
Working day in and day out.
In more than 190 countries and territories.
Reaching the hardest to reach.
The furthest from help.
The most excluded.
It's why we stay to the end.
And never give up.

unicef
for every child