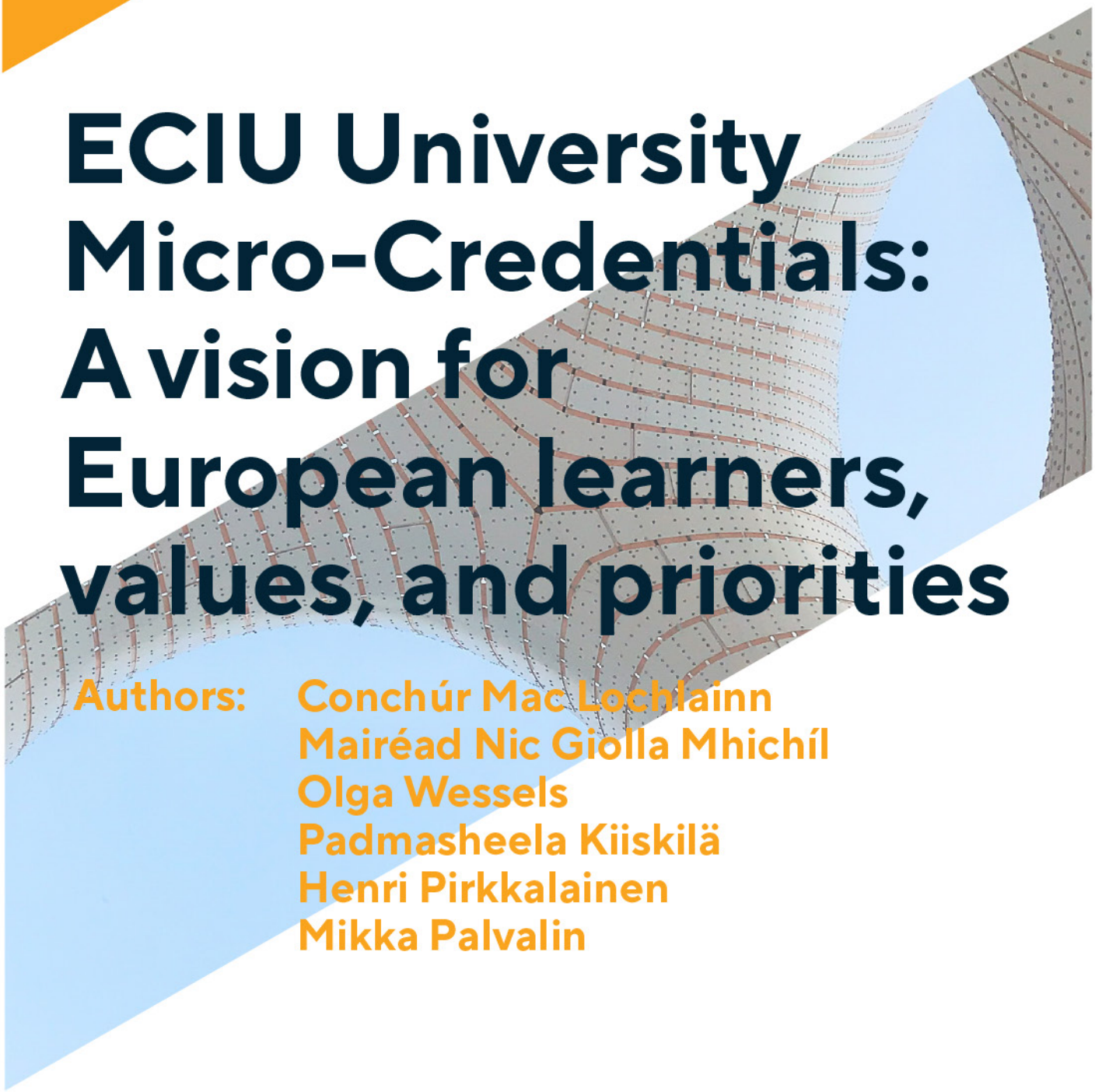
ECIU university

ECIU University Micro-Credentials: A vision for European learners, values, and priorities



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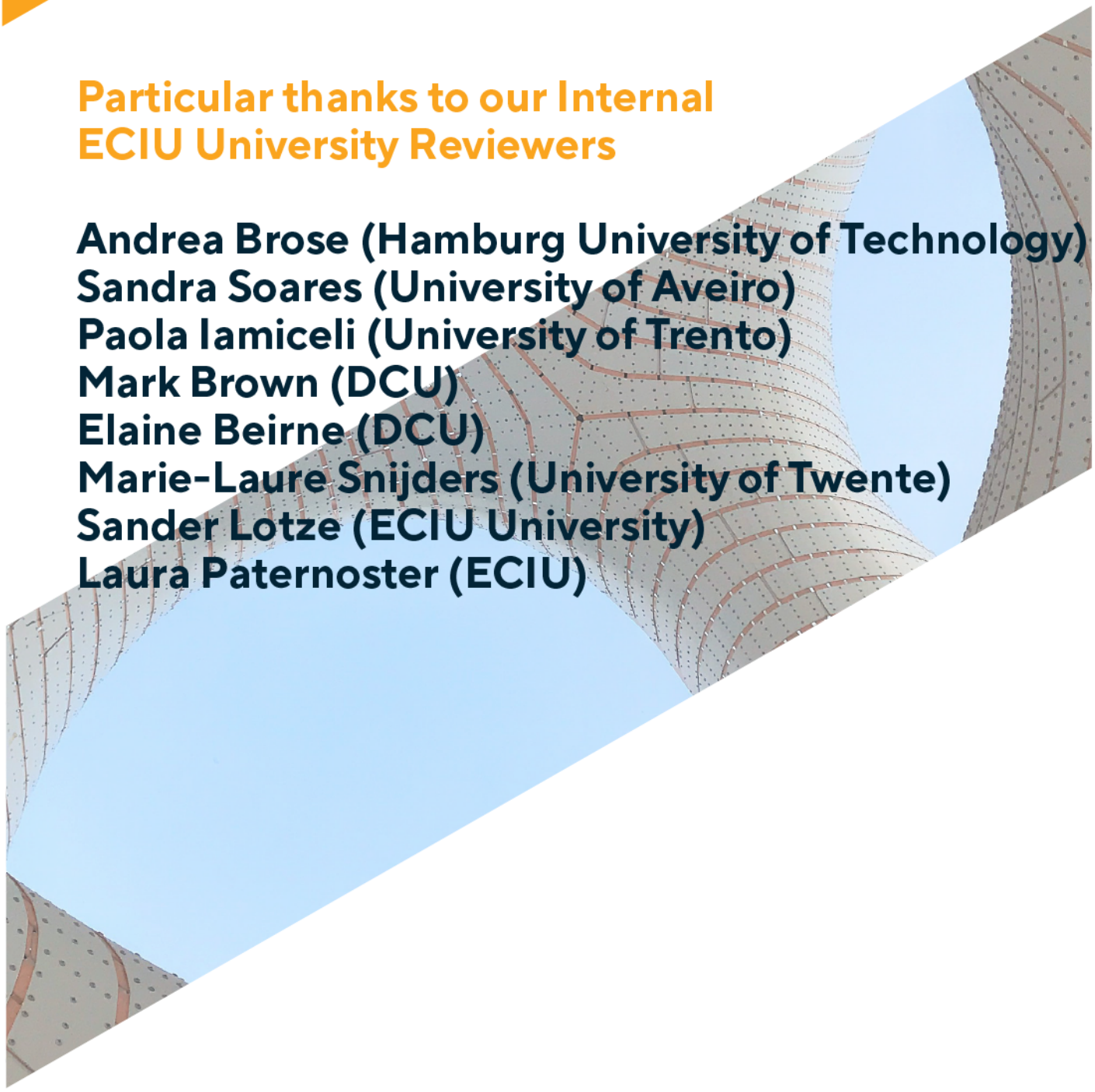
Paper 3 ECIU Micro-Credential White Paper Series



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Paper 1 from the series,[1]
Paper 2 from the series[2]

[1] April 2020, https://www.eciu.org/news/towards-a-european-micro-credentials-initiative
[2] January 2021, https://www.eciu.org/news/paving-the-road-for-the-micro-credentials-movement

1. Introduction

ECIU University is a forerunner in the space of micro-credentials, and is committed to innovative, transformational change of higher education in Europe. Over the past year there has been increased activity from a wider range of policy makers, institutions, and national regulatory bodies relating to micro-credentials. In 2021, ***ECIU published Paving the Road for the Micro-Credential Movement***, outlining both actions taken by the Alliance, and our conceptualisation of the future of micro-credentials. Since then, there has been an explosion in interest in micro-credentials around the world, including, but not limited to:

- The Council Recommendation on a European approach to micro-credentials for lifelong learning and employability, ensuring high-level commitment of 27 EU Member States to the micro-credential movement,
- The publication of a draft ***UNESCO report*** (2021) sketching progress towards a common global definition,
- An extended ***consultation process*** on micro-credentials within Europe, leading to a refined European definition and informing the European Roadmap,
- The publication of the ***final report*** of MICROBOL, on the current European Higher Education tools and their fitness for purpose for micro-credentials (MICROBOL, 2022),
- The development of a common ***micro-credential framework*** in Australia, and regional frameworks in Canada,
- Micro-credentials for labour market training education and training project by ***CEDEFOP,***
- The publication of the ***STACQ*** report on the construction and recognition of micro-credentials,
- The establishment of Micro-Credentials sans Frontières, a network of international professionals considering micro-credentials amongst many more emerging network and Special Interest Groups,
- Regional, national and international projects relating to micro-credentials, such as MicroCreds in Ireland, eCampus Ontario in Canada and Micro-credentials led by RISE - Research Institutes of Sweden.

These trends and activities show continuing evolution in the maturity of the micro-credentials field, particularly with respect to higher education. Further significant growth is very likely to occur, particularly in the context of European developments. Indeed, given this policy maturity and call for greater development, 2022 may well be dubbed **the Year of the Micro-credential**, with media and policy interest reaching a heightened pitch. ECIU University welcomes these, and the plethora of other initiatives, in this space. In this paper, we set out ECIU University activities and a proposed European approach, including how to assess the impact of micro-credentials. We conclude with specific recommendations building on work to date to advance micro-credentialing both in Europe, and internationally. It should be noted that we do not delve into micro-credentials from an industry-led or from vocational education perspectives. ECIU University, however, recognises the potential for synergies and those already realised, while remaining distinctively cognisant of the significant body of work needed to realise the full potential of offerings derived outside of the education and training space. It is important to ensure cohesive and coherent learning opportunities and proofs of learning independent of the site of learning are available for European learners and citizens across their lifetimes.

1.1 ECIU University & The European Micro-Credential Roadmap

ECIU University and its constituent universities have actively participated in feedback processes at all levels to draft and refine the European understanding of micro-credentials, including embedding this conceptualisation and definition within our own micro-credentialing approaches. Notably, member states have adopted varying perspectives on micro-credentials, and the European approach is evolving from regarding micro-credentials as solely a 'proof' of the learning outcomes to 'certification' of the learning outcomes of short-term learning experiences (e.g., European Commission, 2022; Kiiskilä et al., 2022) to a more nuanced conceptualisation of these offerings. This conceptualisation includes enhanced learning design to support active learning, co-construction and relevance for a broad range of societal and employability goals, with specific emphasis on the provision of unique value propositions for lifelong learning and employability (MICROBOL, 2022; ECIU, 2021). Quality-assured higher education learning opportunities based on active pedagogies, along with transparent competence development via flexible learning pathways arecentral to ECIU Universty. Ultimately, learner empowerment is achieved through the provision of these opportunities with verifiable digital proofs of learning, this lies at the core of ECIU University.

ECIU University welcomes the following description outlined in the European approach (2022):

"Micro-credentials certify the learning outcomes of short-term learning experiences, for example, a short course or training. They offer a flexible, targeted way to help people develop the knowledge, skills and competences they need for their personal and professional development."

This description provides clarity regarding not only what a micro-credential is, but also what benefits they might offer. In this paper, ECIU critically reflects on some recent developments, shares the results of ongoing European micro-credential pilots, and concludes with recommendations to realise the potential of micro-credentials in 2022.

2. European values for European micro-credentials

ECIU University proposes that there is a space within a wider micro-credential landscape for a distinctly **European approach** to micro-credential development. To support the revised definition, we outline three tentative principles distinguishing a proposed European approach from other models globally:

1. **Grounded in principles of social good and of learner development,**
2. **Signature pedagogy and philosophy emphasises real-world, authentic, and co-constructed learning**
3. **Guided instruction and constructive empowerment: giving European learners tools to build their personalised and collective learning futures.**

Our first principle is that a European approach to micro-credentials is **grounded in principles of specific social good,** including meaningful paid work, societal transitions, fostering active, empowered citizens and learners. This can be contrasted with market-driven forms of commodified, atomised educational provision which has been identified as a risk by several scholars in recent research (see Brown and Nic Giolla Mhichíl, 2021: 5, for summary). Some argue the micro-credentialing "craze" is imbued with the language of neoliberalism, reflecting a new learning economy (Ralston, 2021). This approach is evident in certain media discourse, focusing on micro-credentials as *"huge for the future of work"* (Perna, 2021), or *"quicker and cheaper ways to improve your resume"* (Combs, 2020). In contrast, European values of solidarity, sustainability, and transnational cooperation serve as lodestars guiding ECIU University, supporting provision of flexible learning pathways, as counterpoint to the aforementioned neoliberal discourse (Desmarchelier and Cary, 2022). Micro-credentials are the means to a number of possible ends, not necessarily towards atomised learners as individualised consumers, but collaborating, engaged, and cooperating citizens, respectful of difference, and capable of developing better futures together.

Our second principle is the additive potential of micro-credentials within wider higher learning ecologies, **designing learning experiences with real-world and authentic application.** This is in keeping with a vision of **Universities Without Walls**, as recently outlined by the EUA (2021). ECIU University's signature approach, Challenge-Based Learning (CBL), engages with, and is informed by, societal *"big questions"* woven through theory, practice and societal engagement. European citizens and nations face a planet in flux, and the demands placed upon learners require agility and flexibility, but also social and intercultural competences to work together for common goals. Global events illustrate that these values and principles are needed now more than ever, and that educating learners for an unpredictable future is critical.

Our third principle is working towards the **development of more flexible learning pathways,** where students have guided opportunities to make informed choices, and where disciplinary barriers are lowered, but respected. Central to this is realism regarding base levels of knowledge and skills development. The potential of transversal cooperation is not fractured knowledge, but learning from new and shared perspectives, in authentic contexts. A concern regarding micro-credential adoption is the plausibility of ***"unbundling"*** macro-qualifications (such as third-level undergraduate degrees), and the degree to which it is possible to construct domain-level competencies among cohorts of learners with distinct experiences. Micro-credentials should complement and potentially enhance current macro-qualifications, being additive to a wider range of learning experiences.

2.1 ECIU core micro-credential values

ECIU University maintains its position as a forerunner in the development of micro-credentials, and the principles outlined above are rooted in clear, foundational values, including:

- Academic quality,
- Entrepreneurial mindset,
- Open ecosystem,
- Agility and flexibility,
- Personalised, inclusive community,
- Impact on society,
- Resilience into the future.

These values are grounded in commitments to European cooperation, and to prepare and empower 21st century learners for a world in flux, in which they will need to navigate new challenges together and be ***future capable*** (White and Dunne, 2022). These challenges are stark, ranging from technological, such as the unpredictability of preparing graduates for a changing world, to social cooperation across cultural and national boundaries, building peaceful and inclusive relations. To do so, learners must both learn from each other, and be prepared to continue learning journeys across their lifetimes.

2.2 European regulatory context

ECIU University acknowledges that micro-credentials are a critical pillar of the European educational and, in particular, the higher education landscape. They is a flagship initiative of the European Skills Agenda, the European Pillar of Social Rights Action Plan and European Education Area. In line with the first principle of the European Pillar of Social Rights, appropriately tailored micro-credentials can support continuous access to quality education and training for skills development, while delivering on learners' and societal needs. Furthermore, operational and implementation lessons can be learned from existing National Framework of Qualifications (NFQs), such as the Irish NFQ, supporting learning opportunities of smaller credit values which are special purpose, supplemental and non-major awards. This demonstrates the potential complementarity between micro-credentials and major award types, providing opportunities for a more nuanced approach and understanding of a European Degree. The challenges outlined above require agility and new thinking, while remaining faithful to European social, political and European Higher Education Area (EHEA) values.

A common language, with political and policy support, is crucial to unlock the potential of micro-credentials in higher education and for society.

Therefore, ECIU University welcomes the member state's commitment as stated in the recent Council Recommendation on micro-credentials for lifelong learning and employability and utilising current EHEA tools to develop complementarity and bridges between micro-credentials and major award types.

2.2.1 Council Recommendation on micro-credentials for lifelong learning and employability

ECIU University welcomes the adopted Council Recommendation on micro-credentials for lifelong learning and employability by EU Member States in June 2022. Both national commitments and European coordination to support the micro-credentials movement is needed, with a shared definition supported by national authorities being critical.

ECIU University is committed to working with industry and societal partners to develop, co-construct and co-deliver micro-credentials, furthering a comprehensive micro-credential ecosystem. ECIU University is committed to moving from prediction-based, reactive approaches to understanding the needs of learners, societal, professional and industry partners, fostering real collaborative provision of personalised and relevant flexible learning opportunities.

ECIU University welcomes the use of skills-intelligence systems to analyse labour market needs and demographic changes as foundational aspects to support focused and responsive development of micro-credentials in key areas for the benefit of society and to address skill shortages and areas of growth. ECIU University is committed to using these intelligence systems to analyse labour market needs and demographic changes, along with focused engagement with stakeholders as a key and foundational aspect to support agile and collaborative development of strategic micro-credentials.

Lastly, ECIU University supports the move to mobilise micro-credentials as a vehicle by which research is translated into new learning opportunities, as research and learning are interconnected. Through its unique focus on challenge-based research, ECIU University will explore how micro-credentials within the Alliance can achieve this. Support for lifelong learners, e.g., via individual learning accounts, is also of importance, with a complimentary focus on lifelong learning and up/reskilling of citizens and workforce forming the heart of the ECIU University educational vision.

2.2.2 European Strategy for Universities

Micro-credentials are a suitable, and hence important, vehicle to deliver on the ambitions of the European Strategy for Universities, supporting the four key objectives of the strategy ***(see Table 1).***

ECIU University emphasises **the need for a Legal Statute for European University Alliances**, to deliver on a transnational approach. Universities must be recognised and assured as higher education institutions throughout Europe, with means of institutional cross-validation (such as through ECTS/Bologna processes)[3]. ECIU University proposes a European competence passport, built upon individual and flexible learning pathways with micro-credentials at the core of a future **European Degree.**[4]

3 https://www.eciu.org/news/why-europe-needs-a-legal-statute-for-universities
4 https://www.eciu.org/news/flexible-european-life-long-learning-pathways-eciu-universitys-take-on-the-european-degree

Table 1:
Objectives of European Strategy for Universities

The report on stackability completed under the STACQ[5] project is a useful basis for considering how micro-credentials can be used and recognised from this perspective, complementing both traditional macro-qualifications, and the ECIU University vision for the building of and recognition of qualifications, independent of size. This would enable a true learner-centred approach to European education, responding to society's needs and accessible to lifelong learners. This perspective regarding the European Degree aligns with European ambitions pertaining to **Individual Learning Accounts**, ensuring access to education tailored to learners' needs, throughout life and independently of employment.

Key objective of the European Strategy for Universities	ECIU University response
Strengthen the European dimension of higher education and research.	ECIU University is developing European learning pathways through combinations of the most relevant learning offerings from the 14 member institutions based throughout Europe (and Mexico), deeply reflective of the European dimension.
Consolidate universities as lighthouses of our European way of life.	The ECIU University micro-credentials support access to future-proof skills and competences as additions to conventional education and degrees, thereby reaching existing learner cohorts and targeting new types of lifelong learners.
Empower universities as key actors of change in the twin green and digital transition.	Via a challenge-based method of learning, in co-creation with society, tailored around SDG 11 and encompassing both green and digital transitions, micro-credentials deliver on the needs of society and expansion of learning opportunities.
Reinforce universities as drivers of the EU's global role and leadership.	ECIU University's approach is cross-border, bringing the most relevant education together and co-creating challenges with society ensuring Europe's attractiveness as a partner in global cooperation.

5 https://www.nuffic.nl/en/subjects/recognition-projects/stacq-2020-2022

3. Pathways for impact and co-construction - ECIU participants as active citizens, empowered learners, and thriving earners

Substantial work at a European policy level has provided a cogent definition of micro-credentials. However, evidence regarding the practical impact remains lacking (although this is not unique to micro-credentials). Defining "impact" requires assessing what exact impact is intended, and can only be understood through considering the social, environmental and technological aspects involved. A question facing HEIs exploring the use of micro-credentials is what are they hoping to achieve, and what additional benefit is accrued through doing so? Too little focus has been placed on this issue, and recommendations remain general, in that they tend to presume either a) micro-credentials are an inherent disruptive good, or b) that they are a threat and means of deconstructing higher education. In reality, both could be accurate, or neither, and nuance is required in clarifying these discussions.

3.1 Pathways of progress

Table 2 introduces four different perspectives for conceptualising impact, reflecting an ECIU approach to collaboration. The table encompasses:

Learners, referring to individuals engaging in intentional study (in a narrow sense), and/or open to engaging in lifelong non-formal learning opportunities (in a broader sense),

Society, our shared social fabric, incorporating and encompassing civic, personal, family and institutional elements,

Industry, both for-profit private enterprises (including SMEs), multinational corporations, and public-sector bodies,

Higher Education, formal educational institutions, recognised and chartered both nationally, and/or at European level.

Society, Industry, and Higher Education (HE) are broad categories, used to refer to (varyingly) social, educational, vocational, and industry interests. They should not be taken as generalisations, or an assumption that each category is homogenous. Viewing how these elements intersect, however, provides a roadmap for moving from generalised principles to specific areas that micro-credentials can fulfil and improve provision.

Though high level, the grid in **Table 2** presents examples of how value and impact can be considered, depending on focus. Intersections represent areas that micro-credentials could impact through opportunities for further collaboration and deeper partnerships. Importantly, the table also outlines possible tensions and choices which face educational systems in the 21st century, in particular.

From a **societal** perspective, higher education is a nexus of knowledge/expertise which can enable and empower learners to consider social issues, to reflect critically, and to become confident, active citizens. Higher education institutions (HEIs) also serve as important voices in public fora, provoking debate, while generating and communicating information for public consumption and challenge. From an **industry** perspective, higher education is a possible collaborator in the generation of commercially useful innovation, and one of many conduits through which large portions of the European workforce is continually educated.

Table 2: Indicative models of collaboration and impact

Collaborative domain - desirable outcomes	Learner	Society	Industry	Higher Education
Learner	Collaboration, connection, and friendship.	Membership of tolerant societies, with peace, stability, and prosperity.	Opportunities to earn, progress and thrive in employment.	Relevant knowledge and both disciplinary and transversal experiences.
Society	Engaged, active, and dynamic citizens.	Sustainable and open societies, equitable and socially just.	Generation of meaningful paid work and broad-based employment for social good.	Transfer of expertise and knowledge to ensure social good.
Industry	Competent, flexible, well-rounded and developed learners.	Enterprising and supportive social environment.	Agile and future-focused economic system.	Generative and exploitable knowledge and expertise.
Higher Education	Inquisitive and open learners, comfortable collaborating and engaging.	Value of knowledge, and mind-sets oriented towards growth.	Opportunity for collaboration, integration of practice and learning.	Shared insight and research, international collaborative models.

As Oliver (2019) notes, these concerns intersect. A challenge facing educational systems is supporting the provision of broad-based paid employment for wide sections of society to foster social inclusion. It is both possible and desirable to position micro-credentials as one means through which social challenges can be confronted, through empowering students to work both together and individually, to generate social and economic good.

3.2 ECIU University micro-credentialists

ECIU University learners, or *micro-credentialists,* exist within these wider social and economic contexts, and are shaped by interwoven and sometimes contradictory elements. The literature on micro-credentials has largely focused on defining desirable elements (such as that learning paths be flexible, with increased choices), but to date has not presented a clear value proposition, including not only economic value, but value incorporating social good. As McGreal and Olcott (2022: 16) note, if micro-credentials are viewed simply as *"nice-to-do"*, they are unlikely to be financially or institutionally attractive.

From an ECIU perspective, micro-credentials are considered through lenses of how they can improve the lives of those who take them and, therefore, society in general, where participants are:

- **Active citizens,**
- **Empowered learners,**
- **Thriving earners.**

Below, brief descriptions of each domain are presented, highlighting idealised skills and values to illustrate the principles underpinning these domains.

3.2.1 Active citizens[6] - Social domain

Active citizens are curious and civic-minded, with awareness and appreciation of the opportunities and challenges facing a changed Europe and planet in the 21st century. They understand these challenges require cooperation, but also respect the differences and diversity visible across our continent. They know their membership of society is not simply expressed through democratic participation. Each individual has a right, and responsibility, to explore and critique the major issues facing us, while being aware that our perspectives are fallible. They are keen to learn from the experiences and stories of others and are confident in both listening to evidence and assessing its validity for themselves.

3.2.2 Empowered learners - Educational domain

Empowered learners understand the skills they are developing and improving at HEIs, either formally and/or informally, encompassing both knowledge, and competences and skills. They also know that HEIs are not the only places they learn. They see and seek links between their classrooms and their wider worlds, while viewing barriers between them as somewhat artificial. They are confident collaborating with others across Europe and the world, as well as being comfortable exploring opportunities to learn at different points of their life. Empowered learners are confident they have the tools to make informed decisions regarding their lifelong education, and feel supported and satisfied they can exercise choice, preference, and control over elements of their learning pathways.

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6 The term 'citizen' as utilised here refers to members of a common community of shared values and commitments, not a particular legal status, and therefore includes refugees and non-citizen residents of Europe.

3.2.3 Thriving earners - Economic domain

Thriving earners are confident and creative, prepared for labour markets that are changing, through social, technological, and demographic shifts. They are driven by diverse desires and wish for economic opportunities which are both meaningful and sustainable. Many want to found a business for themselves, or to engage in social enterprises, while others see the links between ecological reasoning and the potential of new technologies to generate new opportunities. They link their competencies to their professional development and are pragmatic about improving their practices. They know much can be learned and improved through cooperation and that insights are possible throught harnessing knowledge from other domains of their lives.

3.2.4 Putting it Together

To foster and develop these varying perspectives and values, learning experiences should have the following characteristics detailed in **Figure 1** across each domain.

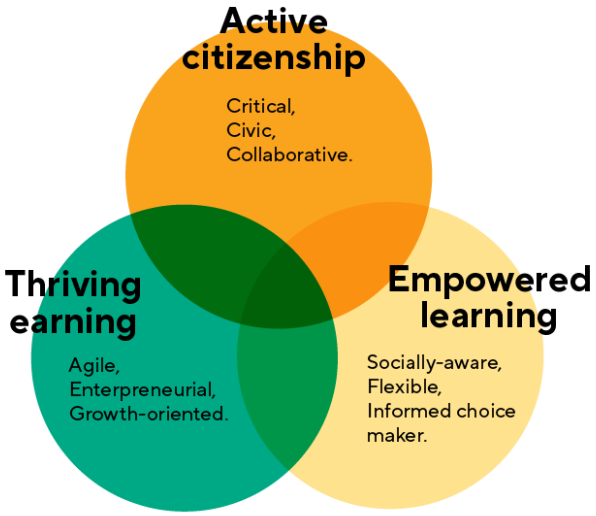

Figure 1: Fostering holistic learning

The ECIU University adopts a holistic, learner-centred approach, with core questions for policy makers and HEIs being: How specifically do micro-credentials add value within a wider educational ecology? How do these spaces intersect, to further improve and promote European values? As argued above, a danger is excessive focus on market-driven rhetoric, where industry needs and desires are foregrounded, and the social/personal potential of micro-credentials for European learners is neglected or relegated to a secondary concern. The above principles are ideals and are forwarded in many senses through existing educational provision. As will be highlighted through concrete, forerunning examples, the principles need not be in opposition, or mutually exclusive. Active, 21st century European citizens must demonstrate an array of social, economic, and educational competencies. Micro-credentials have the potential to support *"...more flexible and tailored interactions between learners and higher education systems"* (OECD, 2021: 7). However, this potential can only be achieved through cogent, clear, and demand-based propositions, empowering learners, encouraging cooperation, and furthering common purpose.

4. ECIU University's steps on the road towards European micro-credentials

4.1 ECIU University - stepping into Micro-Credentials

In this section, we briefly outline the ECIU University experience with micro-credentials and micro-credentialing through the:

- Identification of demand propositions furthering collaboration,
- Linking social and economic value in practice and research,
- Experimenting with distinct use cases and prototyping.

A dynamic and evolving initiative, ECIU University has focused on providing actionable evidence of transnational cooperation and development of micro-credentials **(Table 3).** Experiences highlight both the potential and challenges of micro-credential adoption, and the lessons which have been learned through iteration, particularly working across partner institutions.

Table 3:
Summary of ECIU approach and evidence

Identification and operationalisation of demand	Linking of social and economic value	Experimenting with use cases
Co-creation of specific micro-modules and learning opportunities, including intercultural competences module.	Research-based identification of best practices, including how to tether social and skills-based approaches (e.g., Hussey and Das, 2022).	Exploration of digital credential approaches (elaborated below).

This work is ongoing and is providing an overarching framework and perspective guiding the ECIU University approach. Regarding the **identification of demand**, a focus has been placed on generating learning opportunities which provide learners with opportunities to collaborate and challenge, while learning from each other. Although the bulk of these experiences reflect commitments under SDG11, a holistic approach has seen ECIU University learners explore language learning skills and intercultural competences, and it is through this process that ECIU University will develop its flexible pathway approach.

As argued below, linking both **social and economic value** entails viewing research and practice as complementary and symbiotic. Many of the approaches which the ECIU University have adopted are innovative, and as such, assessing the impact of these practices has been a core concern. Correspondingly, given the consortium's commitment to innovation, a strong **experimental spirit** is visible in activities. This commitment has led to the piloting and iterative development of several possible forms of learning opportunities and the awarding of digital credentials, explored below, with a focus on developing best-practice and complementary systems to foster trans-European collaboration in the development of micro-credentials for for-credit learning in Europe.

4.2 ECIU University's Micro-Credential journey to date

In our previous paper, we described some of the actions required to pave the road for a European micro-credential movement at scale. These related to five pillars, namely:

- **Definitions and Standards,**
- **Quality Assurance,**
- **Credits and Recognition,**
- **Storage, Portability and Platforms,**
- **Successful Uptake.**

These pillars are adopted from the European Commission's criteria (2020), with ten actions outlined, providing discrete benchmarks to track project activities. Although much has been achieved over the past 18 months (see **Table 4**), there is still much more to be done.

Table 4:
Summary of ECIU micro-credential progress since 2021

Pillar	Elements
Definitions and Standards	✓ A common micro-credential definition adopted by the Alliance, ✓ Alignment of learning opportunities and digital credentials, ✓ Internal white paper on digital and micro-credentials, ✓ Competency modelling under construction.
Quality Assurance	✓ Common learning opportunity frameworks to guide mapping and development of micro-credentials, ✓ Established a Recognition Accord through adoption by ECIU Board, ✓ Application of EHEA tools and institutional QA to learning opportunities.
Credits and Recognition	✓ Participation in the European Blockchain Services Infrastructure (EBSI) Early Adopter Programme with micro-credentials, use case and cross-border scenario, ✓ Flexible learning pathways concept development.
Storage and Portability	✓ Participation of all ECIU partners in European Digital Credentials for Learning Early Adopter Programme, ✓ Issuing digital credentials for ECIU University learning opportunities for both formal and informal learning.
Successful Uptake	✓ Co-designed a range of transversal and co-constructed learning opportunities (such as the Intercultural competence micro-module), ✓ Piloted digital proofs of micro-credentials among institutions in the Alliance and with external societal and industry stakeholders, ✓ Involvement in national and international networks on micro-credentials.

4.2.1 ECIU Learning Opportunities and Micro-Credentials

ECIU University has primarily utilised two forms of learning opportunities, namely: i) ECIU University Challenges, and ii) ECIU University Micro-modules.

ECIU University Challenges *are learning opportunities that engage diverse teams to solve real-life problems using a novel and practical method of Challenge-Based Learning (CBL). Business and public partners provide real-life problems and are involved in the learning process. Themes consider the UN's Sustainable Development Goal No. 11, "Sustainable cities and communities".* Initially, ECIU challenges emphasised extra-curricular activities that generally were not credit-bearing. Through piloting, we have identified the potential to embed ECIU challenges into existing structures of institutions, yielding, in particular cases, ECTS recognition, having the potential to contribute to credit-bearing micro-credentials.

ECIU University Micro-modules *are a short learning opportunity that are formally assessed and support learners to fill their knowledge gaps and boost their capabilities in order to successfully engage in ECIU University challenge-based activities.* The criteria for micro-modules emphasise online and hybrid learning, small size (1-3 ECTS) and provision in English whilst meeting the current definition and standards for micro-credentials.
ECIU University has a large number of learning opportunities that align with values on green transition and SDG11, as illustrated in **Figure 2 (see next page).**

Figure 2:
ECIU University SDG and Transversal Learning Opportunities

Through these learning opportunities, and further collaboration with stakeholders, ECIU University is committed to the provision of flexible learning pathways to engage with learners in lifelong ways. The provision and personalisation of these pathways, based on learner competency and disciplinary needs, is expected to evolve in the next phases of the ECIU Alliance. Working towards a deep portfolio of micro-credentials with versatile learning opportunities (i.e., CBL-based collaborative activities and micro-modules) poses both challenges and opportunities.

One of the main challenges relates to the heterogeneous characteristics of the learning opportunities. CBL activities typically go beyond short learning experiences, and learners are ideally empowered to set their learning outcomes during the process of learning. ECIU University is committed to developing Challenge-Based Learning and active pedagogies at scale, and in the context of micro-credentials. Managing proofs of learning while providing the range of ancillary services for smaller credit offerings can be a challenge for ECIU University institutions to navigate. A deeper dive into these issues and the implementation of solutions at scale across the Alliance is a key aspect of the next phase of the ECIU University. The Alliance, however, is convinced that the potential of micro-credentials outweighs these issues, and the following section illustrates some of the steps that ECIU University is taking with respect to platforms and digital credentialing.

4.2.2 ECIU University and Implementing Digital Credentials

ECIU University has focused on advancing digital credentials as a means of capturing certain proofs of competence development of learners, recognising the critical importance of issuing trustworthy, secure, and verified credentials. Verifiable digital credentials and portable micro-credentials acceptable across institutions, utilisable for job hunting and lifelong competence development, are a core aim of the ECIU University (e.g., Kiiskilä et al., 2022). To inform our work in this domain, interviews were conducted with academic experts and platform providers, concerning how digital credentials can be managed with competence data as proof of record for a micro or macro-credential from ECIU University. Verification, validation and a data model supporting frameworks for assessment, levels and competence data are some of the key features required by HEIs. All partners in ECIU University are participating in the Early Adopter Programme (EAP) for the European Digital Credentials for Learning (EDCL), to build knowledge, and make informed choices on technologies and processes for managing micro-credentials. Benefits of starting this EAP include using a data model that is quickly becoming a standard and used in other European initiatives such as the European Blockchain Services Infrastructure (EBSI). Through EBSI and its wider community, including teachers and administrators, ECIU University, along with a variety of key stakeholders, including Ministries of Education, Technology and open-source partners and higher education institutions, are investigating how co-constructed micro-credentials can become portable across different systems.

Different forms of credentials were issued for learning opportunities offered by ECIU University, including certificates of completion, and digital credentials using the EDCL platform. While digital credentials can make learners more aware of what they have learned, demonstrating verifiable proofs of skill development, a “silver bullet solution” is not possible, as management of digital proofs must extract information from and communicate with information systems of varying interoperability. A common commitment to recognise digital credentials is underway within ECIU University Alliance, and progress is continuing in this area.

ECIU University is committed to working towards implementing and issuing verifiable digital credentials, advancing both European and national digital credentialing strategies and influencing the development of next generation technical solutions for managing micro-credentials and alternative credentials. This is a key component at all levels of the systems and is of paramount importance to ensure that micro-credentials issued are viewed with trust by multiple stakeholders.

5. ECIU University's next steps on the road to micro-credentials

5.1 Summary

The ECIU University perspective on micro-credentials is dynamic and continually evolving. It is characterised by rapid change, highlighting ongoing work, not only within the Alliance to develop personalised and flexible learning pathways for 21st century European and global learners, but also influenced by the wider discourse and activities of the European micro-credential movement. It embraces the ECIU University vision and ambition for European values, with greater educational mobility, in which transnational cooperation and collaboration are foregrounded. Given the growing interest of a range of stakeholders in micro-credentials, 2022 may indeed prove to be **the year of the micro-credential.** If so, there remain foundational questions, with a particular struggle remaining: articulating what a micro-credential-based approach can deliver that is unique, and additive, within a wider higher education credential ecology (see Brown et al., 2021b). The emerging conceptualisation of the European Degree is important in this context, and an inclusion of micro-credentials within this conceptualisation would demonstrate a clear and decisive move by the EHEA to remain at the forefront of innovation in learning.

Alternative models and approaches are emerging globally, such as the Australian government's recently adopted national framework (2022). This framework appears to minimise disruption to the current Australian education and training systems, being heavily influenced by the upskilling and reskilling agenda (p.11) evidenced in particular by inclusion of ***nano learning opportunities***[7] (p.17). Though providing a fuller critique of this approach is beyond the scope of this paper, it is clear there are opportunities within Europe to imbue wider values, vision, and principles within broader learning experiences. This is particularly true in light of the social, technological, ecological and economic challenges requiring active citizenship, empowered learners, and thriving earners, both for the ***Europe of the now*** and to navigate the ***Europe of the future***. The ECIU University is cognisant of these challenges and opportunities and commits to develop an agile and progressive approach through flexible learning pathways, as it deepens and evolves its learning portfolio, processes and principles with respect to micro-credentials.

5.2 Key recommendations & questions

Building upon work conducted to date, the ECIU University is further committed to aligning and developing a Pan-European vision for micro-credential provision, with HEIs and European Alliances driving a dynamic and evolving ecosystem. To do so, the ECIU University reaffirms its support for several aspects of present European policy and national implementation, while calling for greater progress on other elements. The following recommendations in **Table 5** set out key areas for the growth of micro-credentials at scale across the EHEA.

7 The Australian framework recognises, at the lower end, bite-size learning, with the lowest workload amounting to 1 hour of duration or circa .04 ECTS

Table 5:
ECIU University Recommendations

ECIU University Recommendations

1. There is a clear need for dedicated **financial support to accelerate the rollout of co-constructed micro-credentials and to specifically support and upscale projects at the European level to support co-construction. This includes wider infrastructure needed to facilitate micro-credential implementation at scale.**

2. Following the outputs of the MICROBOL project, a dedicated and focused effort is required to **promote harmonised national legislation and or guidelines** in education and training, to remove system-level barriers for micro-credential implementation.

3. European University Alliances are key stakeholders **in the design and implementation of the European approach to micro-credentials** as cross-cutting networks of institutions committed to innovation. European Universities and Higher Education Institutions must be positioned as key drivers of change.

4. There is a need for **clearer, more tangible links** between micro-credentials and *the Council Recommendation on individual learning accounts* (and vice versa). Explicit links between these policy initiatives need to be articulated, to ensure that they reach their fullest potential.

5. A scaling at national and European level of the **Europass Digital Credentials** to issue and receive micro-credentials, to **augment and support rollout** across Europe, **and to attract more education and training providers into engaging with the system** by reducing barriers, are all required.

6. The conceptualisation and **assessed quality criteria** for a European Degree, **creates bridges and leverages** the micro-credential movement to demonstrate the complementarity between forms of learning opportunities as supported by the European Qualification Framework and other EHEA Tools.

7. A clear focus on bespoke micro-credential characteristics is needed at European level, supporting relevance, collaboration with societal, professional and industry stakeholders while also implementing sustainable and **holistic learning design** for micro-credentials, building upon the outputs of the MICROBOL findings (MICROBOL, 2022).

8. There is an urgent need for **both national and European-driven awareness-raising campaigns** for micro-credentials aimed at a wide breadth of stakeholders, from learners across the continuum, to employers and employees.

9. **Baseline studies and benchmarks of micro-credential implementation, adoption and impact** at the European and national levels need to be designed and undertaken.

10. **Coherent and cohesive policy coordination** is required across the Commission and at national level to ensure that **both the employability and lifelong learning drivers** for micro-credentials can be distilled into **clear actions and activities.**

In outlining these recommendations, and reflecting upon this paper, member institutions have raised important questions, relevant for wider stakeholders, at European, and national levels. The first is to note that HEIs do not supply provision in isolation, and as such, the identification of a specific HEI-focused niche for micro-credentials is important. Europe's educational institutions are leading what Olcott and McGreal (2022) term *"the most ambitious in scope and coverage driving the micro-credential landscape..."* (p. 12) which is recognition of the ground-breaking work of the European Commission in shaping dialogue. A logical next step is to underscore and emphasise:

Why, in a global, multi-stakeholder environment, are European HEIs well-suited to provide micro-credentials, and what is the European value proposition?

The ECIU University holds the view that European HEIs presents a unique perspective within a pluralistic landscape, and that the forms of social, participatory and active learning approaches identified as critical here require ongoing leadership from the HEI sector, to join the dots, and make concrete change. As universities, and within innovative higher education alliances, we hold parallel and complementary commitments to both social and economic good as core to our mission. If micro-credential provision is left to industry alone, or focuses solely on market-driven dimensions, it seems likely that it will fail to fulfil this wider promise, representing domain-stratified workplace training, without wider social or transformative missions. Further, dialogue-based approaches, with HEIs at their centre, enable *"sharing costs, lowering risk, and expanding offerings to the key stakeholder groups – students, employers, and partners"* (Olcott and McGreal, 2022: 12). Fostering partnership models with industry and other actors, where HEIs leverage quality, expertise, and existing excellence, to aid more dynamic and flexible pathways for learners, are highly desirable. It does give rise to further core questions, including:

What forms of quality assurance are external partners expected to meet within these partnerships?

How will quality be assessed, evaluated and assured in terms of micro-credentials from non-education and training providers at national and European levels?

European universities provide detailed, transparent, and well-developed means of assessing quality, such as through the Bologna criteria, a frontier where recent developments have been welcome (MICROBOL, 2022), re-emphasising the need for common European standards and support in micro-credential development. Applying these standards to providers outside of the education and training system requires legislation and engagement by national quality agencies, with legislation already developed or advancing in some jurisdictions. The application of this to micro-credentials is critical (i) to ensure transparency for learners and other stakeholders, (ii) to support quality and recognition and (iii) to support an integrated and seamless approach to micro-credentials with the wider education and training system.

5.3 Conclusion

Building upon previous work (Brown et al., 2021a), ECIU University reiterates the need for holistic and integrated processes of micro-credential design and construction, adopting multiple stances, and harnessing interdisciplinary perspectives, as outlined in **Table 2**. Policymakers should move beyond describing the potential of micro-credentials, to supporting their implementation and assessing their impact. This approach

must encourage learners and HEIs to draw connections between formal, informal, and workplace learning. If the past two years have made anything apparent, it is that binary-based thinking is ill-suited to the complexity and hybridity inherent in educational provision (see Zmas, 2020). Moving beyond such thinking is easier said than done, and continued leadership from the European Commission is needed, along with consideration from educational institutions regarding what is presently absent from existing educational provision and design.

Discourses relating to micro-credentials as either a panacea to all ills, or fatalistic predictions of further commodification of higher education, are simplistic, failing to capture nuances entailed in micro-credentials as a possible means of furthering and deepening European values and cooperation. If adopted as atomised, bite size chunks of a-contextual learning, as certain scholars theorise, micro-credentials will fail to fulfil their promise, as valuable recognition of shorter-form learning, in much longer-term journeys. They may also vindicate these critics and, at worst, further social and economic precarity, proving the critique *"gig-credentials for the gig economy"* (Wheelahan and Moodie, 2022). If, however, they are embedded in **social demand,** reflecting **complementary** approaches, and furthering **unique understanding**, then they can be a tool for greater social and economic good, empowering learners and citizens, giving them the tools to write their own, and our own, futures.

6. References

Brown, M., and Nic Giolla Mhichíl, M. (2021). Micro-credentials untethered: A wolf in sheep's clothing? Ireland's Education Yearbook. PP 314-321.

Brown, M., Nic Giolla Mhichíl, M., Mac Lochlainn, C., Pirkkalainen, H., and Wessels, O. (2021a). Paving the Road for the Micro-credentials Movement: ECIU University White Paper on Micro-credentials. Available at: https://assets-global.website-files.com/551e54eb6a58b73c12c54a18/6043a9dd006226486010050e_ECIU_Sheet-update_3032021.pdf

Brown, M., Nic Giolla Mhichíl, M., Beirne, E., and Mac Lochlainn, C. (2021b). The Global Micro-credential landscape: Charting a New Credential Ecology for Lifelong Learning. Journal of Learning for Development (JL4D), Vol. 8, No. 2. PP 228-254.

Combs, V. (2020). Micro-credentials are a quicker and cheaper way to improve your resume. TechRepublic. Accessed from: https://www.techrepublic.com/article/micro-credentials-are-a-quicker-and-cheaper-way-to-improve-your-resume/

Desmarchelier, R., and Cary, L. (2022). Toward just and equitable micro-credentials: an Australian perspective. International Journal of Educational Technology in Higher Education (ETHE), No. 19, Article. 25.

European Commission. (2020). Towards a European Approach to Micro-Credentials.

European Commission. (2022). A European approach to Micro-Credentials. Accessed from: https://education.ec.europa.eu/education-levels/higher-education/micro-credentials

EUA. (2021). Universities Without Walls: A Vision for 2030.

Government of Australia. (2022). National Microcredentials Framework. Accessed from: https://www.dese.gov.au/higher-education-publications/resources/national-microcredentials-framework

Hussey, P., and Das, S. (2021). A micro credential for interoperability. Open Research Europe, Vol. 1, No. 109. Accessed from: https://open-research-europe.ec.europa.eu/articles/1-109

Kiiskilä, P. Hanafy, A. and Pirkkalainen, H. (2022). Features of Micro-credential Platforms in Higher Education. In Proceedings of the 14th International Conference on Computer Supported Education - Volume 1, ISBN 978-989-758-562-3, ISSN 2184-5026, pages 81-91.

McGreal, R., and Olcott, D. (2022). A strategic reset: micro-credentials for higher education leaders. Smart Learning Environments, Vol. 9, No. 9.

MICROBOL. (2022). Micro-credentials linked to the Bologna key commitments. Desk Research Report.

OECD. (2021). Micro-credential innovations in higher education: Who, What and Why? OECD Education Policy Perspectives, No. 39.

Oliver, B. (2019). Making micro-credentials work: for learners, employers and providers. Deakin University Research Report.

Perna, M. (2021). Small but Mighty: Why micro-credentials are huge for the future of work. Forbes.com. Accessed from: https://www.forbes.com/sites/markcperna/2021/10/05/small-but-mighty-why-micro-credentials-are-huge-for-the-future-of-work/?sh=5097176302b4

Ralston, S.J. (2021). Higher Education's Microcredentialing Craze: a Postdigital-Deweyan Critique. Postdigit Sci Educ 3, 83–101 (2021). https://doi.org/10.1007/s42438-020-00121-8
UNESCO. (2021). A conversation starter: Towards a common definition of micro-credentials. Draft preliminary report.

Wheelahan, L., and Moodie, G. (2022). Gig qualifications for the gig economy: micro-credentials and the 'hungry mile'. Higher Education, No. 83. PP 1279-1295.

White, B., and Dunne, C. (2022). DCU Futures: Preparing our graduates for a rapidly evolving and unpredictable future. Presentation Slides. Accessed from: https://supporthere.org/sites/default/files/012_dcu_futures-preparing_our_graduates_for_a_rapidly_evolving_and_unpredictable_future.pdf

Zmas, A. (2020). Hybridity in Higher Education: Oscillating Between Public and Private Sectors. European Education, Vol. 52, No. 2. PP 117-131.

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