Micro-credentials for training courses on footwear manufacturing

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At present, many tools and experiences are emerging from the collaboration within the EU and the Bologna process (Standards and Guidelines for Quality Assurance in the European Higher Education Area, European Qualifications Framework, European Credit Transfer and Accumulation System, Diploma Supplement, Europass, digitally signed credentials, etc.). These European tools currently available can contribute to a better transparency in solutions, but they may need to be updated to facilitate the integration of micro-credentials (Katos et al., 2020) [1].

Most countries offer micro-credentials in short course units within a degree programme and particular purpose awards. In other cases, micro-credentials are offered in the framework of postgraduate education or described as stackable/standalone modules, short life-long learning courses, and adult training. In general, a micro-credential can have several assigned/estimated ECTS (European Credit Transfer and Accumulation System) in different countries; the range in the number of ECTS credits varies from 1 to more than 100 (Microbol, 2021) [2].

Source: https://ec.europa.eu/education/news/public-consultation-micro-credentials-launched_en

As Shizuka Kato from OECD - Organisation for Economic Co-operation and Development explains in her paper (Kato et al., 2020), a relatively new term, "alternative credentials", is starting to be used. The authors define the "alternative credentials" as credentials that are not recognised as standalone formal educational qualifications by relevant national education authorities. So far, the alternative credentials

[1] Katos, S., Muros, V. G. & Weko , T., 2020. The emergence of alternative credentials. Working paper 217, Paris: OECD

[2] Micro-credentials and Bologna Key Commitments, MICROBOL, 2021, https://ec.europa.eu/education/education-in-the-eu/european-education-area/a-european-approach-to-micro-credentials_en

offered at the post-secondary or tertiary education level are certificates, digital badges, and micro-credentials.

One response to this emerging market demand has been to trademark the outcomes of the digital learning offer with terms such as NanoDegree, MicroMasters, and Micro-degrees to strengthen the brand value of specific offers (Gallagher, 2019)[3].

The Consortium MicroHE, co-funded under ERASMUS+, proposes a new definition of micro-credentials based on a literature review and multi-stakeholder interviews: *"A micro-credential is a sub-unit of a credential that could accumulate into a larger credential or a degree or be part of a portfolio. Examples are Digital Badges, Verified credentials, MicroMasters, Nanodegrees"* (MicroHE Consortium, 2019).

As OECD defines, a micro-credential is a sub-unit of a credential or credentials, which converses a minimum of 5 ECTS points and could accumulate into a more extensive credential or be part of a portfolio (Kato et al. 2020).

Data shows that most countries do not have micro-credentials referred to by the National qualifications framework. Therefore, for most countries, the biggest challenge is the applicability of the tools to micro-credentials, but the implementation at the national level and the awareness of the tools in general still represent a challenge[4].

The micro-credential requires three fundamental elements[5]:
- the **issuer** is the organisation(s) or institution that awards the micro-credential to the users or learners;
- the **user** is the educator who earns micro-credentials;
- the **recogniser** is the school, university or other authorised body that oversees certifications.

Digital technology should be harnessed to facilitate flexible, accessible learning opportunities for adult learners and professionals, helping them re-skill, upskill, or change careers. In addition, there is a need for more ambitious efforts in digital education content, tools, and platforms[11]. These efforts should encourage the uptake, quality assurance, validation, and recognition of courses and learning opportunities in all education and training sectors. Thus, the micro-credentials capture the learning outcomes of short-term learning. In this regard, the European Commission is developing a European approach for micro-credentials[6].

The *Commission to the European Parliament* [6] stated: "automatic recognition of qualifications and study periods abroad for further learning, quality assurance of joint transnational activities. Furthermore, the recognition and portability of short courses leading to micro-credentials would allow the Member States to go deeper and faster in their cooperation, as compared to what they can do now in the context of the Bologna process".

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[3] Gallagher, S., 2019. *How the value of educational credentials is and isn't changing,* Boston: Harvard Business Review- September.
[4] Micro-credentials and Bologna Key Commitments, MICROBOL, 2021, https://ec.europa.eu/education/education-in-the-eu/european-education-area/a-european-approach-to-micro-credentials_en
[5] https://www.nea.org/sites/default/files/2021-01/Micro-credential%20Guidance%20for%20ESPs.pdf
[6] https://ec.europa.eu/education/sites/default/files/document-library-docs/deap-communication-sept2020_en.pdf

The lack of a shared definition and common approach makes employers unsure of what micro-credentials are and which ones to trust. Recognition of prior learning is the most appropriate method currently to recognise micro-credentials for further studies[7].

European MOOC platforms launched a Micro-credential framework fitting into the European Qualification Framework for Lifelong Learning, which combines learning outcomes in higher education and professional training. The critical criteria required are learning outcomes, workload (4-6 ECTS or 100 to 150 hours), and level. A micro-credential should comply with the descriptors of the European Qualifications Framework (levels 6, 7, or 8, with options for Levels 4 and 5, in combination with ECTS) and the equivalent levels in the national qualifications framework of the concerned higher education institution[8].

Internationalisation is a crucial topic: together with the discussion at the national level, the aspect of co-constructing micro-credentials with a transnational approach must be kept in view and taken into account[9].

In the case of footwear, there are Moodle (Modular Object-Oriented Dynamic Learning Environment) and MOOCs (Massive Open Online Course) courses developed by the present consortium, with European funding, that can benefit from the implementation of the micro-credentials, like Sciled (https://sciled.eu/en/), Skils4Smart TCLF 2030 (https://s4tclfblueprint.eu/), Knowledge4Foot (https://knowledge4foot.eu/), Fit2Com (https://www.fit2comfort.eu/), DiaShoe (https://diashoeproject.eu/).

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[7] https://ec.europa.eu/education/sites/default/files/document-library-docs/deap-swd-sept2020_en.pdf
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