Micro-Credentials in Polish Higher Education: Current Landscape and Future Directions

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Abstract:

Purpose: The purpose of the article is to identify the commitment of Polish universities to following through with the Council Recommendation on micro-credentials. It discusses several case studies of Polish universities that offer courses under the micro-credentials scheme. Additionally, we propose good practices for Polish higher education institutions, drawing on international experiences. The objective is pursued with summaries of micro-credential systems found in selected countries.

Design/methodology/approach: This review article analyses the literature on the subject, projects, research reports, and legal documents. The central recommendation document for the deployment of micro-credentials in EU member states is the Council Recommendation of 22 June 2022 on a European approach to micro-credentials for lifelong learning and employability. It is also the foundation for the expansion of micro-credentials in Poland.

Findings: There are only a few universities in Poland that offer courses that can be considered micro-credentials. However they are showing increasing interest in micro-qualifications and have taken steps to implement their own systems (e.g. IBE). Based on examples from countries with experience in micro-qualifications, combined with an assessment of Polish universities, we have identified some potential paths for the development of micro-qualification systems in Poland.

Research limitations/implications: The presented article provides a diagnosis of the current situation of Polish universities in terms of the functioning of the micro-credential system. Information campaigns are needed because there are a number of concerns among university staff. The main concerns of universities relate to: the lack of information on the implementation of micro-qualifications, the lack of legal and organisational solutions at universities, the uncertain quality of micro-qualification certified courses.

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Practical implications: *Based on examples from countries with experience in micro-qualifications, combined with an assessment of Polish universities, we have identified several potential paths for the development of micro-qualification systems in Poland.*

Social implications: *Micro-credentials are emerging as the future of higher education. Polish higher education institutions also appreciate the scheme. They can serve a dual purpose by enhancing the university's portfolio and providing a counterweight to the dwindling student population resulting from demographic decline. The promotional effort is particularly pertinent to Poland because students and many university staff members are still unfamiliar with the micro-credential systems.*

Originality/value: *In Poland, the micro-credentials system is only just beginning to be implemented by higher education institutions. Therefore, it is very important to diagnose the current situation and identify potential paths for the development of micro-credentials systems in Poland.*

Keywords: *Micro-credentials, higher education, lifelong learning, Open Badges, Odznaka+.*

JEL Codes: *I23, I28, J11, H75.*

Paper type*: Review article.*

1. Introduction

Micro-credentials have become a pertinent area of lifelong learning. The starting point for the discussion on the role of micro-credentials is 'how to make lifelong learning opportunities more available, accessible and flexible to respond to societal challenges and keep pace with social, economic, and technological changes' (Project Bologna, p. 3). The problem's relevance has been amplified by the COVID-19 pandemic, which affected many domains, including education.

The topic is particularly relevant to national and international higher education. According to the Council Recommendation of 22 June 2022 (Official Journal of the EU, 2022, p. 11), 'micro-credentials could help certify the outcomes of small, tailored learning experiences.

They make possible the targeted, flexible acquisition of knowledge, skills and competences to meet new and emerging needs in society and the labour market and make it possible for individuals to fill the skill gaps they need to succeed in a fast-changing environment, while not replacing traditional qualifications.

Two years before that, the European Commission responded to the changing reality with a declaration in the NESET Report (Orr *et al.,* 2020, pp. 8-9) to move 'towards the development of a European approach to micro-credentials, to help widen learning opportunities and strengthen the role of higher education and vocational education and training institutions in lifelong learning by providing more flexible and modular learning opportunities.' The document highlights changes associated with the growing demand for more flexible education, driven by the increasing diversification of students' needs.

The above is complemented with the annotation that a micro-credential is 'a document that proves skills in a specific area, achieved with little effort and based on established standards. Microcredential(s) are usually collected and made available in digital form. Their use is a response to changing learning methods and labor market requirements' (IBE).

According to the MIKROBOL 2020 Report, 'microcredentials are certified minor learning outcomes' (Project Bologna, p. 4). The authors of the report defined the success criterion for the European approach to micro-credentials as being understood in the same way over the entire European Higher Education Area.

This could be achieved through common 'purpose, use and certain components of the certification itself to ensure fair and transparent recognition and permeation between national systems, higher education institutions and the labor market' (Project Bologna, p. 4).

Micro-credentials can demonstrate not only new or expanded knowledge but also the acquisition of skills, the practical application of specific concepts, and the ability to perform certain actions (Wheelahan, 2021). These include not only skills and knowledge acquired through formal education but also those gained through various courses, training sessions, and self-learning (Eager, 2020).

Defined shortly, a micro-credential is 'a credential issued for a relatively small learning project that consists of several modules in a given subject' (ICDE, 2019, p. 61).

The definition offered by the New Zealand Qualifications Authority also highlights its relevance to the development of higher education: 'A micro-credential certifies achievement of a coherent set of skills and knowledge; and is specified by a statement of purpose, learning outcomes, and strong evidence of need by industry, employers, and/or the community.

They are smaller than a qualification and focus on skill development opportunities not currently catered for in the regulated tertiary education system' (New Zealand Qualifications Authority, 2021; Kato *et al.,* 2021, p. 2).

Additionally, there are various interpretations of micro-credentials and their visual representations. They can be classified into four groups:

–   'microcredentials as short-cycle education and training;
–   microcredentials as smaller fractions of competence;
–   microcredentials as credits in a digital format;
–   digital open badges as microcredentials for learning and recognition'
      (Brauer, 2023).

These definitions form universal categories used in all countries that deploy or enhance micro-credential systems. Nevertheless, the situation is not entirely clear even in Finland, which has a tremendous and long experience with the system. The most problematic is language education: the discussion on the definitions and ultimate meaning of micro-credentials is ongoing (Brauer, 2021; Davies, 2017).

The functional side of micro-credentials is inherently linked to the graphic form of Open Badges. These 'are an innovative international standard for digitally certifying verified achievements, skills or competencies' (Open Badges). These tokens are aesthetically attractive and contain encoded information for verifying the name, skills, and learning outcomes of the specific achievement.

They also help to identify the holder and issuer of the badge, along with the reason for granting it. Such a comprehensive set of information on the achievement and the holder justifies referring to them as the 'fingerprint in the job market'.

Open Badges originated in 2009-2013, when the MacArthur and Mozilla foundations began developing the project. Their efforts resulted in the IMS Digital Credentialing Initiative in 2015, which aimed to implement digital credentials in institutions, businesses, and schools (Mozilla; Alt, 2021). In 2014-2015, the Open Badges standard was employed in such international IT corporations as IBM and Microsoft (Open Badges).

Further effort by its creators resulted in Open Badges 2.0 in 2018 with 'embedded evidence, endorsements, version control and internationalization', followed by Open Badges 2.1 in 2020 (Mozilla).

Today, the Open Badges standard is gaining recognition as a solution for tracking educational and professional development, for example, in the labour market. The badges are available online, offering quick and reliable access to the achievements one seeks to present (Stefaniak *et al.,* 2019; Perkins *et al.,* 2021). Their popularity among institutions, businesses, NGOs, and universities worldwide is growing.

Open Badges can be seen as 'a tool for building motivation, tracking development paths and educational achievements, and raising awareness of competencies' (Open Badges). According to Mozilla Foundation today, 'there are 24 products from 19

organizations headquartered in 8 countries that have gone through the IMS conformance certification process for Open Badges v2.x' (Mozilla).

The process of issuing a digital badge under the Open Badges standard begins with the issuer, who represents businesses, institutions, schools, universities, and other entities interested in utilising this micro-credential method. Issuers establish a badge class, a description of the digital credential with such information about the achievement as the image, name, and description of the badge, standard compliance, criteria for awarding, tags, and expiration information.

The issuer certifies that the skill, qualification, or achievement described in the badge class has been attained. This is achieved through micro-credentials issued to the badge holder (Besser, 2020).

Then, the issuer confirms the qualification, skill, or other achievement as described in the badge class with a credential or digital credential issued to the badge holder. The person then owns the digital badges, can store them with special hosting services, 'and make them available through issuer services, i.e., software that allows recipients to interpret, read, as well as verify the authenticity of the data encoded in badges of the Open Badges standard' (Open Badges).

2. Global Situation of Micro-Credentials

Micro-credentials have become an integral part of higher education in many countries. The systems differ in terms of their portfolio or how they work in relation to formal education, but their growing availability is indisputable. Interesting examples can be found on various continents. We present some of them below.

A commendable high level of activity in implementing micro-credentials is found in Australian higher education (West *et al.,* 2016). Already, the Australian official definition of micro-credentials suggests their important role in the labour market.

The Australian government has introduced the Microcredentials Pilot in Higher Education in line with the definition in the Tertiary Education Quality Standards Agency Act 2011. The pilot takes place from 2023/24 to 2025/26. Its cost amounts to 18.5 million Australian dollars, including: '$2 million for designing new microcredentials and $16.5 million to support the delivery of the courses to up to 4,000 students' (Microcredentials Pilot in Higher Education).

It is divided into two rounds, with nearly 30 micro-credential courses in the first one and almost 50 in the other. Evidently, there is substantial interest in short education opportunities. The project evaluation will determine how this method of education and qualification elevation may affect the labour market. Additionally, the Australian Government Department of Education intends to determine whether solutions that complement the traditional higher education scheme increase

educational activity among less engaged groups. It may be particularly effective considering new educational funding opportunities through FEE-HELP, a loan from the Australian government to cover education costs in whole or in part (FEE-HELP).

Hence, 'the benefits of extending FEE-HELP to students undertaking microcredentials will be tested, including to determine whether it increases the participation of historically underrepresented groups in higher education' as one of the pilot's goals (Microcredentials Pilot in Higher Education).

In the USA, the growing interest in short educational solutions certified with micro-credentials is largely linked to the rising costs of traditional university courses. The added benefit of this approach is that the badge holder can quickly present new qualifications and skills to the employer (through the Open Badges standard). Moreover, micro-credentials are highly relevant also because of changing labour markets and employer expectations (Olcott, 2021).

According to 2022 data from Credential Engine, students had access to 1,603 micro-credential opportunities compared to 820 a year before (Best Colleges; Raport Credential Engine). These micro-qualifications were available through MOOCs (Massive Open Online Courses), where diverse methods are applied, such as presentations and Internet forums (MOOC).

Moreover, 'learners participated in hundreds of thousands of certificates and non-credential offerings, including over 2,150 coding bootcamp courses and 430,000 digital badges' in 2022 (Best Colleges).

Results reported in the 2024 Best Colleges report (Venable, 2024) also indicate significant interest in micro-credentials among American education institutions. The survey covered school administrators. They reported combining traditional learning methods and short courses (67%). A growing demand for micro-credentials was reported by 42% of the respondents.

The increasing importance of micro-credentials was also evident in a survey by UPCEA, a not-for-profit organisation for higher professional and continuing education for adults. Opinions of more than 750 professionals, including recruiters, indicated that over three-quarters of work candidates had qualifications other than higher education in their CVs.

Moreover, nearly all organisation leaders appreciated the benefits of their employees' micro-qualifications (UPCEA). Let us conclude the matter of micro-credentials in the USA by examining why they are so popular and can often easily compete with traditional university courses. One example is Oregon State University, where students can achieve micro-qualifications much faster than a traditional diploma. 'Microcredentials at Oregon State range from 9 to 12 quarter

credits whereas a full undergraduate degree is 180 credits, a minor is generally between 27 and 30, and certificates range from 27 to 32' (Oregon State University).

Micro-credentials are just as popular in the European higher education setting. In Europe, micro-credentials are regulated by the Council Recommendation of 22 June 2022 on a European approach to micro-credentials for lifelong learning and employability. This document aligns with a coordinated EU strategy for employment, mainly by supporting a high level of employee qualifications and training.

The recommendation highlights responsiveness to economic changes and support for future-oriented professions, such as those in the digital and environmental sectors. In addition, constant improvement and expansion of qualifications are necessary in light of the ageing European population (Council Recommendation, 2022).

The micro-credential approach, accepted and promoted by the European Union Council in its recommendation, considers micro-credentials proof of small-scale education and training activities. In a way, they complement traditional qualifications and provide a flexible path to new knowledge and collecting achievements. They can come as formal, non-formal, and informal learning (European Education Area).

Note that although micro-credentials were present in Europe at the time, they lacked a universal definition and uniform standards. Therefore, the recommendation contains a definition of such digital credentials and numerous relevant notions and terms, such as providers of micro-credentials, formal, non-formal and informal learning, stackability (combination of various micro-credentials), etc.

The council recommendation further includes the 'European principles for the design and issuance of micro-credentials'. These are ten universal principles that can improve the trust in micro-credentials and their quality. These aspects are quality, transparency, relevance, valid assessment, learning pathways, recognition, portability, learner-centredness, authenticity, and information and guidance (Council Recommendation, 2022).

Finland has had a micro-credentials scheme in place for a long time (Kukkonen 2021; Kiiskilä *et al.,* 2023). It dates back to 2015 when the Finnish government initiated the educational system reform, focusing on professional education. The practical reforms began in 2018 and involved a pivot in labour-market-oriented education (Brauer *et al.,* 2023; Rintala *et al.,* 2018).

Today, Finland emphasises both traditional learning and achievements certified with Open Badges. According to S. Brauer (2019; 2023), the standard has been employed in Finnish education for over a decade.

The long years of practical experience with the standard are reflected in achievements certified with the badges and even linguistic adaptation, as types of badges are referred to with specific words. The Finnish micro-credentials scheme facilitates the stacking and accumulation of achievements in any form. Vocational education and training (VET) is a distinct category in the Finnish education system.

It targets various groups, including young, unqualified individuals in secondary schools of the second degree and working adults. Professional education and training offer reliable professional competencies coupled with continuous development and qualifications improvement (MINEDU, 2021). The system creates a high demand for achievements certified with micro-credentials. Students can choose how to manage their qualification process: completing an entire course in one go or only one module.

They can also stack parts of various qualifications to diversify their portfolio (Brauer, 2023; MINEDU, 2021). This approach is fostered by the Open University of Applied Sciences (Open UAS), a Finnish programme offering knowledge and skills from various domains without the requirement to obtain a complete diploma.

Open UAS students can choose from a variety of flexible learning schemes, including online courses. It is an excellent method for qualification upgrading and expanding (Open UAS). Micro-credentials fit into this system perfectly as Open UAS students can choose courses from another UAS and include them in their diploma (Brauer, 2023, p. 53).

Ireland is another good example of a micro-credential system in Europe. One particularly interesting project is MicroCreds, which was implemented from 2020 to 2025 and supported by the Department of Further and Higher Education.

Its total value is 12.3 million pounds sterling, provided by the National Training Fund among other organisations. The project leader is the Irish Universities Association (IUA), which collaborates with seven Irish Universities.

The scheme's primary goal is to establish a consistent quality framework for micro-credentials. The partner universities develop and test flexible education solutions for lifelong learning. They work towards standards for the entire Irish higher education system (IUA). Notably, the project emphasises collaboration with businesses, including the industry (Brown et al., 2023). MicroCreds has four main pillars:

- ➢ Strand 1: National Framework for micro-credentials;
- ➢ Strand 2: MicroCreds Innovate sustainable model for data informed university – enterprise collaboration;
- ➢ Strand 3: Discovery Platform linked to a digital credentialing solution (Europass early adopter);

> ➢ Strand 4: Agilely developed and flexibly-delivered suite of micro-credentials across partner universities' (IUA).

3. Research Methods

This review article analyses the literature on the subject, projects, research reports, and legal documents. The central recommendation document for the deployment of micro-credentials in EU member states is the Council Recommendation of 22 June 2022 on a European approach to micro-credentials for lifelong learning and employability.

It is also the foundation for the expansion of micro-credentials in Poland. The promotional effort is particularly pertinent to Poland because students and many university staff members are still unfamiliar with the micro-credential systems.

The purpose of the article is to identify the commitment of Polish universities to following through with the Council Recommendation on micro-credentials. It presents several case studies of Polish universities that offer courses under the micro-credentials scheme. Additionally, we propose good practices for Polish higher education institutions, drawing on international experiences. The objective is pursued with summaries of micro-credential systems found in selected countries.

4. Micro-Credentials in Poland

In Poland, the dissemination of knowledge about micro-credentials and support for standardisation in higher education are based on the *General Guidelines for the Use of Micro-credentials in Higher Education and Science Institutions in Poland*, issued by the Ministry of Education and Science on 31 October 2023.

The document draws on the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability to define micro-credentials and establish a formal and legal framework for crediting learning outcomes (European Education Area).

The guidelines report results of 2023 research by the State Research Institute for the Ministry of Education and Science (MNiSW). Its objective was to diagnose the readiness of higher education and science institutions to implement micro-credentials from the recipient and issuer perspectives.

This broad research project involved desk research on the current international state of the art regarding micro-credentials, focus group interviews with students and graduates, in-depth interviews with university administrators and representatives, and workshops with staff tasked with organising and delivering open courses and training classes (Raport PIB). Its authors had three specific goals:

> ➢ To diagnose the readiness to deploy micro-credentials in the operations of higher education institutions.
> ➢ To define opportunities and threats for institutions and learners linked to micro-credentials.
> ➢ To draft recommendations for the most effective way to integrate micro-credentials into the higher education system' (Raport PIB, p. 15).

The primary conclusions concerned motivation to study, the value of the programmes, and the assessment of other educational solutions. Furthermore, having analysed the offerings of the participating universities, the authors could summarise the educational solutions currently available to students, graduates, secondary-school students, children, seniors, and migrants (Table 1).

Table 1. *Current educational opportunities at Polish universities (regular study programmes excluded)*

Target	Opportunity
Students	– Summer and winter schools – Extracurricular expert courses – Certification courses with business partners, – such as Cisco and Microsoft – Scientific circles – Courses in collaboration – with businesses
Graduates	– Postgraduate studies – Expert courses
Secondary-school students	– Courses in fields typical of the university faculty, such as language courses, programming, etc. – Secondary-school examination courses – Thematic courses – University-delivered classes at school
Open courses	– MOOCs through Navoica, for example – Open university courses – Language courses
Other targeted initiatives	– University of the Third Age – Children's University – Courses ordered by businesses and institutions – Polish for refugees from Ukraine

Source: *PIB Report (2023). Micro-credentials. A new direction for higher education. State Research Institute, Ministry of Education and Science. Warsaw, p. 67.*

The results presented above suggested the potential role and position of micro-credentials in higher education. First, university representatives demonstrated diversified familiarity with micro-credentials. Among them were individuals involved in planning and deploying micro-credentials, as well as those completely new to the system.

The respondents reported numerous challenges, concerns, and threats related to micro-credentials. They consider external circumstances to be important, including a lack of legal and organisational regulations and a low level of general knowledge of micro-credentials. They also listed staff shortages and insufficient funds as internal barriers. Other problems could be linked to the operational principles for micro-credentials, their standardisation, and recognition.

The authors of the report offered recommendations based on the results to universities seeking to deploy micro-credentials. They call for support from the ministry and other stakeholders regarding training, technology, and other related matters. Other forms of assistance would involve regulations on the deployment of micro-credentials and ensuring their quality and standardisation.

Universities would have to verify whether components of their educational portfolio could be included in a micro-credential scheme. Another important issue is the adaptation of digital credentials to students' expectations regarding their availability and flexibility (such as online versions). The report also emphasises the importance of communication and cooperation with employers (Raport, PIB).

The Polish micro-credential system uses the Odznaka+ (Badge+) application. It is an application 'for issuing, collecting, storing and sharing digital badges and equivalent PDF certificates. It allows users to digitally certify different types of skills and achievements' (Odznaka+).

It enables users to digitally confirm various skills or achievements and collect information on other educational and professional experiences, as well as participation in events (IBE). Odznaka+ can be accessed via a web browser. Individual users can also use the mobile version.

It offers plenty of opportunities to various groups regardless of age, education, or place of living. All that matters is the achievements the application certifies.

Odznaka+ was developed by experts from the Institute for Educational Research. It is founded on the Open Badges standard, which is the best micro-credential system, and has numerous original features. One of them is a digital portfolio of the user's badges. It aligns perfectly with the current and possibly future labour market trends to use only electronic CVs or digital portfolios.

Odznaka+ was tested with many organisations, like universities, schools, certifying bodies, private organisations, NGOs, and sports clubs and associations. They could become acquainted with the system, its mechanics and functions. Their feedback shaped the final version of the application. It is important, considering the user comfort of both badge holders and recipients. One important aspect of the application for the Polish system of micro-credentials is that the team working on

the application engage in educational efforts to improve the reach of micro-credentials and the application itself (Microcredentials).

The fact that Odznaka+ is based on a global standard (Open Badges) used by global business leaders, the best universities, and international institutions is its indisputable strength. Therefore, the geographic range of Odznaka+ and its credentials is not limited to the Polish labour market.

To the contrary, it can be used for international job or university applications. It is not limited to the Polish system, which is especially important for the growing number of young people interested in studying and working abroad (Zintegrowany System Kwalifikacji).

The practical application of digital credentials can surely include preparing a dossier of achievements for job recruitment purposes. It is a valuable tool for job seeking, allowing individuals to effectively present their achievements. It can certify skills or qualifications outside of the official credentials offered by formal education, such as university diplomas or job experience (Bielecki, 2025).

Odznaka+ can be particularly useful for primary and secondary school students. They can start collecting achievements now to use them when applying to universities.

Another critical aspect of digital badges is the opportunities they provide for certifying skills that could not have been previously proven, such as self-learning achievements. Moreover, they can certify achievements related to hobbies and passions, in addition to those related to work or education. In the age of social media, it is a path to reaching large audiences for self-promotion (Odznaka+).

The main features of Odznaka+ include:

–   creating diverse credentials as badge classes with data identifying the achievement,
–   recipients verifying badges and digital certificates,
–   issuers visualising skill development paths,
–   users collecting badges to build a portfolio,
–   integrating with social media,
–   issuers creating virtual business cards to show which achievements they certify with digital badges (Odznaka +).

Before micro-credentials are introduced in Poland, the scheme is tested with pilot programmes. One of them is 'Micro-credentials – a pilot for a new solution supporting lifelong learning' by the Institute for Educational Research. The project was funded with European Funds for Social Development (FERS).

Its goal was to diagnose the practicability of micro-credentials for building skills and qualifications under the lifelong learning concept. The implemented solutions stem directly from the Council Recommendation on a European approach to micro-credentials of 22 June 2022.

They focus on acquiring and updating knowledge and competencies to improve people's position in the evolving labour market. Furthermore, the recommendation proposes improving the quality, flexibility, and accessibility of the educational offer to facilitate more effective learning and career management. (IBE; Council Recommendation 2022).

The project is aimed at groups engaged in developing ICT skills, including:

–   'representatives of universities (rectors, lecturers),
–   representatives of associations, educational institutions and NGOs,
–   employers looking for employees with specific skills,
–   training companies,
–   recruitment agencies,
–   industry organisations and sector skills councils,
–   employees,
–   young adults entering the job market, e.g., graduate students, trainees' (IBE).

The project's tasks follow its division into four main parts. These are:

–   to develop standards for issuing micro-credentials (including designing, describing, and ensuring trust),
–   to complete a pilot deployment of digital micro-credentials,
–   to work towards the availability of Odznaka+,
–   to popularise micro-credentials and take action to deploy them practically, also in policies (IBE).

The report *Development forecast for higher education in Poland by 2030* for the Polish Rectors Foundation (Woźnicki 2024) expects micro-credentials to grow more relevant in education. The concept is relatively new in Poland, and not many universities have deployed the system.

According to the authors, 'We have barely started to discuss many solutions used in European universities, such as micro-credentials or individual training accounts' (Woźnicki 2024, p. 2009).

Nevertheless, some universities join forces with various sectoral organisations to attempt to deploy micro-credentials or engage in pilot tests. Importantly, they often choose to cooperate with local technology providers.

The issue is relevant to the integration of the Polish system with European ones. Polish universities also emphasise regional cooperation and standards (Mikropoświadczenia, e-book 2025).

Although no Polish university has yet deployed complete short learning opportunities, and there are a few courses with digital credentials, cooperation within European university alliances is intensifying.

Some examples include the technical universities united under the ENHANCE alliance (Warsaw University of Technology), the ECIU consortium (Lodz University of Technology), or the UNA EUROPA alliance (Jagiellonian University). Being part of ENHANCE, the Warsaw University of Technology offers the Certificate on Climate Action (Micro-Credential) (ECCA).

The participants acquire knowledge and skills related to climate change, as well as tools and methods for climate adaptation. The process spans four modules, with the last one (Summer School) closing the certification (ENHANCE).

This joint effort with international universities is very popular among students. Still, the important matter is what actions Polish universities take vis-à-vis micro-credentials independently of international partners.

The Medical University of Wrocław is one of the Polish higher education institutions that have been successfully using micro-credentials for some time. It has been the first medical university in Poland to issue digital micro-credentials using the Open Badges standard. So far, Odznaka+ offers the following micro-credentials:

– 'Issued micro-credentials/badges (Badge+ system)
– 'Viscera (Visceral disorders in correlation with the musculoskeletal system)
– abcUSG (abcUSG – ABC of ultrasound)
– Stomach (Viscera in osteopathic approach – stomach diagnostics and therapy)
– ABR Basics
– Disc (Fairy tale about the intervertebral disc)
– Restore hearing
– First Aid (Lifesaver Basic Level)
– Fundamentals of Population Research
– Basics of working with a urogynecological patient
– Supporting child development: Shantala massage, functional hand therapy
– Methods supporting child development: Developmental movement method
– Legal and ethical aspects of conducting medical experiments
– Stop the Bleed' (Microcredentials UM).

Koszalin University of Technology has also started its micro-credential system. It is used for courses at the university's Stock Exchange School delivered in cooperation with the Warsaw Stock Exchange Foundation. The opportunity consists of two levels of courses:

1. 'Investing 101 (basics): 16 hours of classes in 6 focus blocks.
2. Stock exchange for intermediates: 14.5 hours of classes in 5 focus blocks' (Szkoła Giełdowa).

Participants receive both a physical certificate from the Warsaw Stock Exchange and an electronic micro-credential issued by the Koszalin University of Technology.

Another Polish university with micro-credentials is the University of Lodz. The system is based on Regulation No. 73 of the Rector of the University of Lodz, dated 10 April 2024, on the general principles for other learning forms at the University of Lodz, including those involving micro-credentials. Some of the courses offered at the university with micro-credentials are:

➢ Fundamentals of micro entrepreneurship education. The course is designed for secondary school teachers who deliver entrepreneurship classes. It covers teaching knowledge and skills, as well as practical teaching tools and methods.
➢ AI in teaching. This training course covers theoretical aspects, such as the principles of working with AI, as well as workshops, discussions, and individual project assignments (UŁ).

The AGH University of Science and Technology in Kraków also embarks on its micro-credentials journey. Its system is defined in the Regulation of the Rector dated 11 February 2025. The university is drafting a list of courses for which digital certificates will be awarded (AGH). Other universities in advanced stages of micro-credentials deployment are the Warsaw University (UW), Gdańsk University (UG), and Jagiellonian University (UJ).

5. Conclusions

There are only a few universities in Poland that offer courses that can be considered micro-credentials. However, the system's popularity is expected to grow as European Union member states implement it in line with the Council's recommendation.

The report *Micro-credentials. A new direction for higher education* for the Ministry of Education and Science reveals diverse awareness levels of micro-credentials among representatives of Polish higher education institutions. The main concerns at universities include:

− no information regarding the implementation of micro-credentials,

—   no legal and organisational solutions at universities,
—   uncertain quality of courses certified with micro-credentials.

These problems and uncertainties are gradually addressed. Important completed milestones include the specification of the general definition from the Council Recommendation and its adaptation to the Polish constraints. Work on the Polish standards for micro-credential issuing processes is underway. Furthermore, a legal and organisational framework is established to ensure that micro-credential issuers comply with quality standards.

Polish universities are increasingly interested in micro-credentials and have initiated efforts to deploy their systems (IBE, for example). Today, most university websites in Poland mention micro-credentials only briefly, typically in the context of the Council Recommendation, rather than their specific micro-credential offers for students.

Drawing on the examples of countries with experience in micro-credentials, combined with the diagnosis of the Polish universities, we identified certain potential paths for the growth of micro-credential systems in Poland:

➢ Disseminating information among academics is central to the popularisation of micro-credentials. This aspect is particularly important in light of the conclusions in the report for the Ministry of Education and Science regarding the poor state of knowledge on micro-credentials among university staff.
➢ Universities need to develop inviting course offers for students. They should provide new knowledge, but focus primarily on practical skills.
➢ It is vital that universities futureproof their educational offer (skills and qualifications) so that learners are prepared for new challenges and more employable.
➢ The inclusion of micro-credentials in university recruitment procedures can provide candidates with additional value, especially in the case of programmes that are less popular. Such an approach is important in light of demographic changes and lower numbers of candidates.
➢ Practitioners should be invited to help prepare the educational offer best aligned with the changing and challenging labour market.
➢ Business partners should be involved, both as course and training deliverers, and to provide internships where practical skills can be developed.
➢ Efforts should be made to promote the Odznaka+ application for issuing, collecting, and sharing digital credentials. Young people find digital portfolios of achievement certifications more attractive. They are also more convenient for employers.

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