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CO-CREATING HIGHER EDUCATION WITH STAKEHOLDERS: A CASE OF MICRO-CREDENTIALS DEVELOPMENT AT WROCLAW UNIVERSITY OF ECONOMICS AND BUSINESS

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Purpose: The goal of this paper is to examine how co-creation can be implemented in the educational design of short learning formats and micro-credentials in collaboration between a higher education institution (HEI) and its stakeholders.
Design/methodology/approach: The study adopted qualitative, dual-case, practice-based inductive design, analysing 2 purposefully selected WUEB projects. The cases were organised using the ADDIE instructional design framework.
Findings: The study demonstrated that effective implementation of micro-credentials benefits from close co-creation processes. In both examined cases, collaboration with external stakeholders was systematic and multi-stage. The findings confirm that co-creation enhances the relevance, flexibility, and responsiveness of educational offerings to stakeholder needs.
Research limitations/implications: The paper is based on the analysis of two case studies within a single institution, which limits the generalisability of the findings.
Practical implications: The study highlights that involving stakeholders in the design of micro-credentials can increase their relevance and responsiveness, leading to more demand-driven and flexible educational formats.
Originality/value: This paper examined the role of co-creation in designing short learning formats and micro-credentials, based on two initiatives implemented at Wroclaw University of Economics and Business: BIPS and K(A)FE. These case studies demonstrated that the effective implementation of micro-credentials benefits from close co-creation.
Keywords: co-creation, HEI, microcredentials.
Category of the paper: Case study.

1. Introduction

The acceleration of technological progress, the emergence of new employment models, and the increasing demand for adaptable competencies have placed growing pressure on higher education institutions (HEIs) to redefine their roles and responsibilities (OECD, 2025; World Economic Forum, 2020; Altbach, Wit, 2018). Contemporary students expect learning experiences that are not only of high academic quality but also flexible, personalised, and strongly connected to real-world contexts (GNEDUCAUSE, 2023). Simultaneously, employers are seeking graduates with the capacity for continuous upskilling, and effective collaboration within dynamic business environments (Brewer, Comyn, 2015). Both learners and employers now place significant value on short learning formats and practice-oriented experiences that support the acquisition of relevant skills and competencies (Milligan, Kennedy, 2017). In this context, micro-credentials, understood as short, competency-based learning experiences that certify the acquisition of specific skills or knowledge through transparent, assessable, and verifiable learning outcomes (European Commission, 2022), gain significance. For these expectations to be incorporated into the new academic programs, the co-creation involving both industry and learner participation is a promising model of curriculum design (Galvagno, Dalli, 2014). In the case of education, co-creation may involve key stakeholders such as employers, learners, and educators in the design process. This collaborative model ensures that educational programmes respond directly to real market needs and increase shared ownership of the outcomes (Sanders, Stappers, 2008). The goal of the paper is to present the implementation of co-creation in the educational design of short learning formats and micro-credentials, between Wroclaw University of Economics and Business (WUEB) and its stakeholders. The study adopts a dual-case, practice-based inductive approach (Yin, 2018; Eisenhardt, 1989), aiming to illustrate a theoretical co-creation model with two purposefully selected cases of HEI-stakeholder collaboration in short learning formats and micro-credentials design. Both projects were described using the ADDIE framework (Gagné et al., 2005) – an instructional design model of 5 stages: Analysis, Design, Development, Implementation and Evaluation.

2. Literature review

A collaborative approach to education design is rooted in the theory of co-creation (Prahalad, Ramaswamy, 2004) and has a long tradition in higher education institutions. Co-creation is the collaborative process by which multiple actors shape value, solutions, or experiences. Prahalad and Ramaswamy (2004) describe it as joint problem definition and

problem solving between organisations and their stakeholders (mainly consumers), Galvagno and Dalli (2014) define co-creation as distributed, collaborative practices in which actors integrate resources, knowledge and competencies to create outcomes that none could produce independently. Organisations engage in co-creation because it accelerates innovation through diverse knowledge sharing (Chesbrough, 2003), increases stakeholder commitment (Ranjan, Read, 2016), and reduces the misalignment between products and customer needs (Payne et al., 2008). In higher education, co-creation refers to the collaborative processes through which students, staff, industry and other stakeholders jointly develop curricula, learning experiences, and educational outcomes. It's a collaborative, reciprocal process through which all participants have the opportunity to contribute equally to curricular or pedagogical design (Bovill et al., 2011; Dunne, Zandstra, 2011). Co-creation enables institutions to include first-hand industry intelligence in educational programme design, thereby strengthening relevance and improving students' employability (Jackson, 2016). A useful way to conceptualise how co-creation between HEIs and industry can be organised is through established instructional design frameworks such as the ADDIE model (Figure 1).

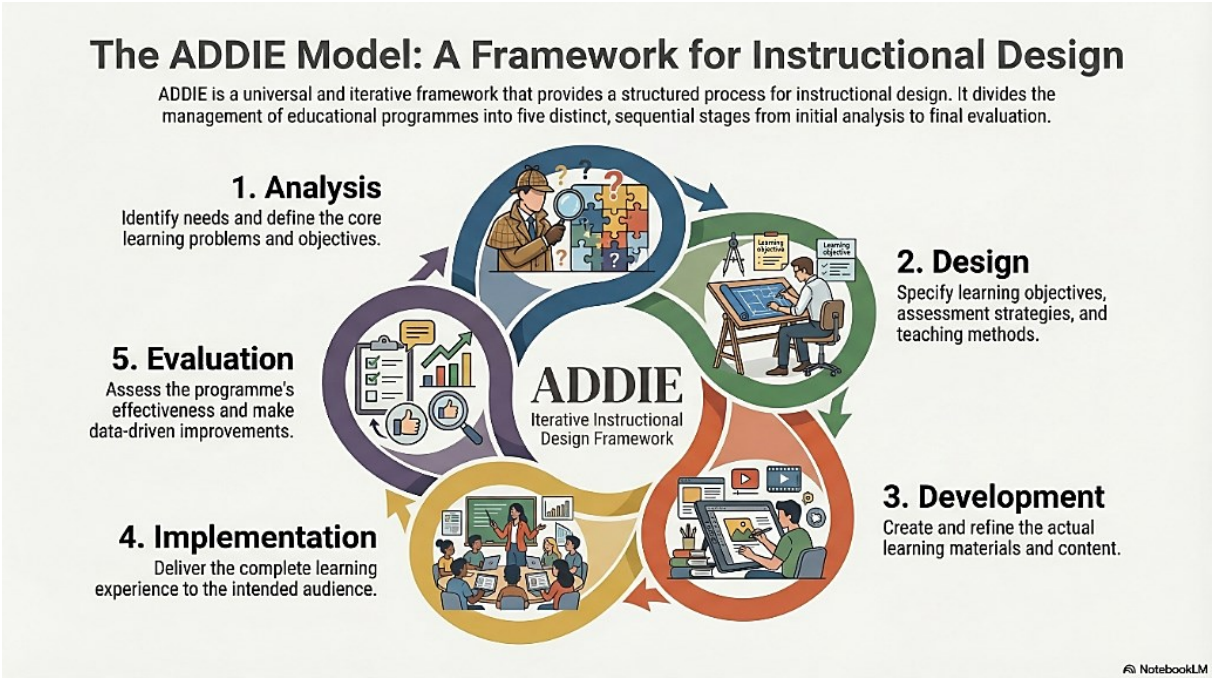


Figure 1. ADDIE Model: a Framework for Instructional Design.

Source: Own work based on (Gagne et al., 2005), visualisation NotebookLM.

ADDIE outlines five iterative stages of educational design (Gagné et al., 2005): Analysis (identifying needs and defining learning problems), Design (specifying learning objectives, assessment strategies and teaching methods), Development (creating and refining learning materials), Implementation (delivering the learning experience), and Evaluation (evaluation and improvements). This model offers HEIs a structured way for collaboration throughout the entire educational design process.

A global trend toward more flexible, personalised, and labour-market-oriented education systems (Gamage, Dehideniya, 2025) leads to solutions that encourage both collaborative design and short formats, as observed in micro-credentials. The concept of micro-credentials has gained increasing interest in recent years, as an innovative mechanism for validating competencies and addressing the evolving demands of the labour market (Johan et al., 2025; European Commission, 2023). According to the European Commission's definition, a micro-credential is a certified proof of the learning outcomes that a learner has achieved following a small volume of learning (European Commission, 2022). Micro-credentials are usually available in digital form and are seen as a way to upskill, reskill and improve employability among adults. They complement formal education systems, which may be too slow to respond to rapid labour market changes, and can provide flexible and market-relevant learning opportunities (Pirkkalainen et al., 2023). This is particularly important because contemporary education systems do not always keep pace with the rate of digital transformation, which may lead to the emergence of a competency gap (Saito, 2026; Tiron-Tudor et al., 2025). Micro-credentials also support the stacking of competencies across different providers and contexts to document lifelong learning progress (CEDEFOP, 2022; Celik, Toprak, 2026). Micro-credentials serve as a bridge between HEIs and the employment sectors (Ahsan et al., 2023). They align educational outcomes with evolving workforce needs, improving employability (Ngoc et al., 2025; Orman et al., 2023; Abdullah et al., 2026).

3. Methods

The goal of the study was to examine how co-creation can be implemented in the educational design of short learning formats and micro-credentials in collaboration between a higher education institution (HEI) and its stakeholders. The authors addressed the following research questions:

1. How to involve stakeholders in educational co-design at different stages of the process?
2. What are the benefits and challenges of the co-creation of educational programmes at HEI?
3. How can micro-credentials be embedded into the design of short learning formats at a HEI?

The study used a qualitative, dual-case, practice-based and inductive approach, drawing on two purposefully selected projects at WUEB. The aim was not to generalise the cases, but to use them illustratively to show how a co-creation model of educational design can be implemented in practice. In line with case study logic (Yin, 2018) and inductive theory-informed research (Eisenhardt, 1989; Eisenhardt, Graebner, 2007), the cases served as concrete examples of stakeholder involvement in co-creation of micro-credentials and other short

learning formats. ADDIE framework – a model grounded in instructional design (Gagné et al., 2005) was used to organise the description of both cases. Each of the ADDIE stages (Analysis, Design, Development, Implementation and Evaluation) was studied from the perspective of co-creation between the HEI and stakeholders.

The study is based on several complementary sources of evidence – primary and secondary, to strengthen the credibility of the analysis:

- Semi-structured expert interviews with key actors involved in the programmes' design and implementation (including programme coordinators and core team members), aimed at reconstructing and validating the design process and stakeholder involvement.
- Internal programme documentation, including programme concepts, instructional materials (e.g., trainer manuals, workshop scenarios), co-design artefacts (e.g., workshop outputs, personas), and implementation records.
- Evaluation and monitoring materials, such as participant surveys, stakeholder feedback reports, pre- and post-assessment tools, and project reporting documents.

Data was analysed using a theory-informed qualitative categorisation approach. All materials were first organised by case and then categorised according to the five stages of the ADDIE model. Within each stage, the analysis focused on identifying kinds of stakeholder involvement, co-creation mechanisms, observed outcomes, and challenges. In selecting cases, two key criteria were considered: projects had to involve participatory educational design and focus on short learning formats appropriate for micro-credentials. Based on these criteria, two projects from WUEB were chosen: BIPS – Business Individual Program of Studies and K(A)FE – Short Learning Formats. Both BIPS and K(A)FE were designed as co-creation initiatives, but they differ in size and maturity. BIPS is a niche programme operating for 10 years, with a co-creation culture and micro-credentials currently being developed. K(A)FE is a new project, designed from the start as a large-scale co-creation process, with micro-credentials built in from the beginning.

Case 1 – BIPS

BIPS is an innovative educational program established in 2017 at WUEB to strengthen the collaboration between students, academic staff, and the business sector. The program aims to provide chosen students with practical, personalised, and interdisciplinary learning experiences that go beyond traditional classroom education, accelerating their professional and personal development. Students who join the one-year program, in addition to their regular studies, begin developmental work within a triad, under the supervision of an academic tutor and a business mentor, to pursue their professional and personal aspirations. During this period, they also participate in a dedicated training programme. BIPS was designed in a modular way (tutoring, mentoring, training) that later served as the basis for the development of micro-credentials. In 10 years of its operations, BIPS has involved appr. 300 students, 50 academic tutors and 50 business mentors.

Case 2 – K(A)FE

K(A)FE is a pioneering competency development programme for adults (aged 18-64), delivered by WUEB in partnership with the Lower Silesian Employers Association (LSEA). The initiative, funded by the European Union, promotes lifelong learning by offering flexible development pathways lasting 2-3 months, which are designed to meet the immediate demands of the labour market. Between 2025 and 2029, the programme aims to enhance the skills of 960 participants.

The programme offers personalised learning through intensive online or on-site workshops and podcasts. Participants design their own two- to three-month pathway by selecting 1 of 3 academies: Specialist, Manager or Leader, and 1 complementary track: Growth Lab, INQUBE or Language. The final element is the Innovathon Workshop, a DT-based collaborative marathon in which participants tackle real-world challenges. Participants receive MIKRO-K(A)FE micro-credentials upon completion.

4. Findings

ADDIE in BIPS

Since its creation in 2017, BIPS has been founded on the values of co-creation and co-design in all ADDIE stages, and co-design has become an integral part of the programme's culture. The key stakeholders of the programme are:

- Students – main beneficiaries, but also co-creators; described as active, self-driven and entrepreneurial.
- Academic tutors – representatives of the University's top teaching staff, who carry out 1:1 tutorials with students, are also a team responsible for managing the programme.
- Business mentors – industry and social environment representatives, carrying out 1:1 mentoring with students. Alumni – BIPS graduates, who serve as student buddies, but also contribute to the BIPS network.

BIPS was founded before micro-credentials were available, but since its creation, it has been building value through modular, short educational formats that allow for personalised student development. Their achievements were certified through a diploma supplement – a practice that is now being transformed into a micro-credential certification.

Good practice of co-creation within BIPS is built on a few major pillars:

- BIPS is a self-organising team, managed by a group of academic tutors, with programme coordinators being appointed by the community. It’s a self-governing project with high autonomy.

- Culture of continuous feedback about the programme from all its stakeholders as a basis for improvements.
- Design Thinking as a method of choice to develop programme changes.

These founding characteristics inspired practical solutions throughout the whole ADDIE process of educational design.

Specifically, significant effort was put into the stage of needs and goals identification and design before the programme took its final shape (A-Analysis and D-Design). Through a series of workshops involving potential business mentors and students, representing student associations, personas for a BIPS student at the recruitment level, a BIPS graduate, a BIPS tutor, and a BIPS mentor were designed, and their roles and tasks were discussed. The workshops provided business mentors with an opportunity to express the value the programme could add to them as employers and the value they could offer students. Students, on the other hand, were able to express how BIPS could complement their regular studies and accelerate their careers. As a result of the workshops, the BIPS framework was designed, and a committed group of potential mentors and students emerged.

After the design stage, content co-development (D-Development) took place. The main role was played by the founding group of 16 academic tutors, who would become the core of the programme's first edition. During the 60-hour tutoring training course, tutorial tools and methods were adapted to the programme's needs, and different cases and work approaches were jointly discussed, practised, and prepared.

Delivery of the programme, understood as the implementation stage (I-Implementation), has also been carried out through co-creation among programme stakeholders. Each student works in a triad with an academic tutor and a business mentor. Even though these two processes are separate, tutors and mentors sometimes meet to discuss how students' aspirations may be better supported. Additionally, an annual off-site training event is organised for the entire community, where different groups collaborate to discuss programme implementation and future plans. Another initiative is DT workshops, during which students, under tutor facilitation, design new solutions for the programme. Some examples of such initiatives are the buddy programme for new students' onboarding, an annual off-site workshop for the entire BIPS community, team-building events or a thematic conference.

The evaluation (E-Evaluation) stage in BIPS has been carefully designed to encourage co-creation in continuous improvement. Twice a year, students and tutors complete detailed feedback questionnaires regarding the current solutions, encouraging reflection on one's own involvement and inquiring about individual needs and aspirations. Academic tutors have also formed a Tutors' Club that meets monthly to address organisational issues and to share knowledge, train, and discuss students' ongoing processes. Academic tutors work under professional supervision to support their personal development and ensure external validation of their work methods.

Designing a programme that places co-creation at its heart and has continued its operations for the tenth year has proven to deliver value. Stakeholders' feedback indicates distinct benefits for each group. Students particularly mention career acceleration, finding their own path, and getting to know themselves, as well as motivational support and a valuable network, as main programme outcomes. Academic tutors, on the other hand, experience a renewed sense of purpose at work and fulfilment of their pedagogical mission, as well as building a strong, trusting team, as the main benefits. Business mentors mention inspiration, self-fulfilment, and satisfaction from sharing their business stories, as well as interesting student collaboration on various projects. Multiple collaborations and joint ventures resulted from the programme.

Co-creation comes with certain costs and limitations, though, that need to be mentioned. Co-design proved to take time. Some of BIPS decisions were sometimes delayed due to prolonged community negotiations or the need for consensus. And yet, the value of commitment, the level of identification with the programme and the personal gains that accompany participation in the process secured BIPS position as one of the flagship programmes at WUEB, with a strong reputation among students, local businesses, and city officials.

ADDIE in K(A)FE

The K(A)FE project was funded by the National Centre for Research and Development (NCBiR). The project's core philosophy is based on co-designing educational activities with various stakeholders.

The success of K(A)FE relies on the ecosystem of professionals and participants:

- Project Participants – individuals pursuing personalised development to improve their professional competencies.
- Advisory Staff – Intake and Talent Guides supporting initial and final competence assessments.
- Educational Delivery Team – trainers facilitating workshops.
- Validation and Support – Growth Guides observing progress and learning outcomes during final workshops.
- Project Management Team – an interdisciplinary group from WUEB and LSEA responsible for coordination and academic leadership.

To validate and motivate learning, K(A)FE uses a two-tier micro-credential system:

- Partial Micro-credentials – granted upon passing knowledge tests and submitting self-reflection journals for specific pathways.
- Final Micro-credentials – a comprehensive confirmation of competencies gained after completing three pathways and successful validation.

The project is based on three fundamental principles: Human-Centred Design, which ensures solutions are intuitive and aligned with user needs; Design Thinking, which facilitates iterative, empathetic educational design; and a commitment to continuous improvement through stakeholder feedback and self-reflection. The ADDIE model is the primary methodology used to develop these educational solutions "with people and for people".

The A-Analysis phase involved preparatory work to ensure that the project was aligned with labour market needs and EU educational policy priorities. This stage included diagnosing employer demands and educational trends in collaboration with LSEA, which informed the descriptions of the target group and the intended learning outcomes. The analysis led to a project concept and secured funding of over PLN 7 million.

In November 2024, the D-Design stage held conceptual workshops with 21 interdisciplinary stakeholders from academia, industry and user groups, supported by experts in neurodidactics, inclusive design and learning methods. Using DT the teams developed educational activities that were both engaging and impactful. This phase produced delivery guidelines, recommendations for inclusive materials, and standardised certification procedures.

The D-Development stage focused on creating integrated teaching resources. The process involved producing comprehensive didactic materials, such as the Trainer’s Manual, agendas, scripts and tests, as well as podcasts, all based on design recommendations. The team also established learning outcomes, validation criteria and micro-credential visual IDs.

The I-Implementation stage focused on launching the first delivery cycle for the 60 pilot participants. The phase concluded with train-the-trainer and orientation sessions.

E-Evaluation is a continuous, multidimensional process comprising both formative and summative assessments. Formative evaluation improves teaching quality and organisational effectiveness, while summative evaluation measures stakeholder satisfaction and competence transfer. Effectiveness is tracked via pre- and post-tests, validation tools and 'lessons learned' journals. Regular stakeholder feedback and monthly status meetings provide a permanent quality assurance mechanism that informs programme.

The benefits of co-creation observed in K(A)FE are primarily associated with developing solutions that respond directly to participants' real-life contexts. When learners are placed at the centre of the design process, learning formats become more accessible and inclusive, and are closely aligned with professional and personal challenges. Collaboration between academic and non-academic stakeholders contributes to a broader, practice-oriented perspective. Iterative design cycles and continuous feedback loops enhance innovation capacity. Co-creation also facilitates knowledge transfer across stakeholder groups, leading to higher-quality, more readily implementable programme outputs, as well as stronger engagement and shared ownership. However, co-creation at the scale and complexity of K(A)FE also involves significant constraints. These include high coordination costs, the need to mediate cultural and communication differences between academia and professional practice, and increased process complexity. Further risks relate to contributors performing multiple roles and becoming

overloaded with work, and to structural limitations arising from public procurement regulations, where price-dominated criteria may hinder the selection of partners who are adequately prepared for iterative and collaborative work.

5. Discussion and Conclusions

In the context of rapid technological change, globalisation and growing labour market expectations, traditional models of academic education are proving insufficiently flexible. As the literature highlights, while higher education provides a solid theoretical foundation, it often fails to keep pace with the dynamic evolution of the competencies required by employers (OECD, 2021). Micro-credentials are therefore emerging as a key instrument for reshaping the relationship between HEIs and the labour market (Varadarajan et al., 2023). This paper examined the role of co-creation in designing short learning formats and micro-credentials, based on two initiatives implemented at Wroclaw University of Economics and Business: BIPS and K(A)FE. These case studies demonstrated that the effective implementation of micro-credentials benefits from close co-creation. In both BIPS and K(A)FE initiatives, collaboration with external stakeholders, particularly those from the labour market, was systematic and multi-stage. Micro-credentials seem most valuable when developed as part of a broader ecosystem of cooperation between HEIs, employers, and learners. As emphasised in the literature, their legitimacy and effectiveness depend largely on the extent of labour market involvement and alignment with actual competency requirements (OECD, 2021).

The case analysis also showed that applying the ADDIE model as a framework for structuring the co-creation process helps to ensure consistency across the stages. In both initiatives, co-creation was not a one-off activity, but a permanent mechanism embedded in the management of the educational process. This corroborates previous findings that co-creation is most effective when iterative and systemic rather than ad hoc (Ind, Coates, 2013).

A comparison of the two cases also revealed that co-creation can take various forms, ranging from an organic, bottom-up community model (BIPS) based on a high degree of autonomy, to a formalised, large-scale, structured model (K(A)FE).

At the same time, however, the study reveals certain constraints of this approach. Co-creation increased organisational complexity and coordination costs and created the need to reconcile diverse stakeholder interests. Therefore, the findings confirm that, although co-creation improves the quality and relevance of education, effective implementation requires organisational maturity and stable governance mechanisms.

As shown in the cases of BIPS and K(A)FE, co-creation should not be viewed as a universally efficient solution, but rather as a trade-off between inclusiveness and organisational efficiency. Therefore, universities should carefully design co-creation processes that balance flexibility and structure according to their own ecosystem and strategic goals.

The study has certain limitations. It is based on the analysis of two case studies within a single institution, which limits the generalisability of the findings. Furthermore, it primarily focuses on the design and implementation processes rather than on participants' long-term employment outcomes. Future research could address these limitations by extending the analysis across institutions and examining the labour-market effectiveness of micro-credentials. Complementary, quantitative studies on a larger sample would further support the development of more generalisable conclusions.

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