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FLEXIBLE UNIVERSITY APPROACHES TO PREPARING PROFESSIONALS FOR THE LABOR MARKET: A CASE STUDY OF A STUDY PROGRAM AT THE UNIVERSITY OF OSTRAVA

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Annotation
This paper analyzes an approach to humanities education through a case study of the Applied Humanities for the Labor Market program (University of Ostrava). In the era of AI and Industry 4.0/5.0, it demonstrates how to bridge academia and market needs using micro-credentials, internships, and project-based learning. Key findings highlight the efficacy of co-teaching (academics with practitioners) and replacing traditional theses with practical solutions to real organizational challenges.

Key words: case study, *Applied Humanities for the Labor Market*, modularization of learning, flexible learning

1. Education in the Era of Industry 4.0 and 5.0: Labor Market Transformation, the Human-Centric Shift, and the Role of Universities

The contemporary functioning of society and the labor market is shaped by a dynamic transformation of workforce demands driven by automation, digitalization, and artificial intelligence. This development, widely conceptualized in the scholarly literature as *Industry 4.0* (Schwab, 2016), is fundamentally altering the nature of human work. The educational sector must respond accordingly to this technological shift, giving rise to the concept of *Education 4.0*. As Tikhonova and Raitskaya (2023) demonstrate, this transformation requires a substantial redesign of pedagogical methods and curricula aimed at fostering the competencies necessary for the digital economy, while simultaneously creating strong pressure for flexibility and lifelong learning.

The complexity of the contemporary labor market is further intensified by the coexistence of multiple generations, each bringing distinct needs, levels of technological literacy, and value orientations into the workplace. From both historical and sociological perspectives, the present labor market represents an unprecedented phenomenon. Up to four culturally distinct generations coexist within the same organizational environments: Baby Boomers, Generation X, Generation Y (Millennials), and the emerging Generation Z. As Stiglbauer et al. (2022) demonstrate in their research on work values, the socio-historical experiences that shaped these cohorts—such as the fall of the Iron Curtain, the rise of the Internet, global economic crises, and the recent pandemic—have generated markedly different motivational structures.

Although fundamental psychological needs, such as the desire for security and meaningful work, remain relatively stable across age groups, expectations regarding working conditions and career development differ substantially. Using the validated New Work Values scale, Stiglbauer et al. (2022) found that younger generations place significantly greater emphasis on cognitive stimulation, flexibility, workplace autonomy, and rapid personal growth. In contrast, older cohorts, reflecting their respective career

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stages, tend to prioritize procedural clarity, stable organizational structures, and formal recognition of their accumulated experience and professional status.

This profound divergence in values makes generational diversity in the workplace a double-edged sword. Research indicates that age heterogeneity within teams can trigger two distinct forms of conflict, as analyzed by Wang and Duan (2025). When organizations fail to manage diversity effectively, emotionally charged affective conflicts tend to dominate. Such conflicts lead to intergenerational isolation, reduced psychological safety, and measurable declines in organizational performance. Conversely, when appropriate management approaches are implemented—particularly shared leadership—generational diversity becomes a source of constructive cognitive conflict. These task-oriented disagreements, stemming from different generational perspectives on problem-solving, have been shown to increase a team's innovation potential by as much as 17% (Wang & Duan, 2025).

Achieving such intergenerational synergy requires moving beyond the traditional defensive perspective on workforce aging, which is often limited to appeals for solidarity. Contemporary evidence-based age management, whose implementation within the context of the European Union's demographic transformation is examined by Seberini (2026), emphasizes the strategic utilization of cognitive complementarity. This approach is based on the premise that older generations contribute crystallized intelligence, including deep contextual knowledge and the ability to solve complex, non-routine problems, while younger generations bring fluid intelligence characterized by technological fluency, rapid learning, and adaptability. Lifelong learning serves as the bridge that effectively integrates these two forms of intelligence into a productive and innovative whole.

The cognitive and value-based differences described above clearly indicate that both educational institutions and corporate human resource departments must move beyond standardized educational models. According to Tikkanen (2023), maintaining competitiveness in an aging society requires the development of highly personalized *tailored learning pathways*. Such pathways should account for the specific strengths and limitations of different generations, transform vocational education and training (VET) to meet the needs of older workers, and create opportunities for reciprocal knowledge transfer between fluid and crystallized forms of workplace intelligence.

While Industry 4.0 focused primarily on technological efficiency, automation, and the integration of cyber-physical systems, recent developments highlight the necessity of a further evolutionary shift toward the Industry 5.0 paradigm. As formulated by the European Commission, Industry 5.0 does not place technological dominance as such at its core, but rather re-centers human beings, being grounded in three fundamental pillars: **human-centricity, sustainability**, and **resilience** (Breque et al., 2021). In this new context, the human worker no longer represents a mere economic "cost" or an element destined to be replaced by automation, but becomes a key actor whose unique cognitive and creative capabilities are augmented and supported by advanced technologies—including collaborative robotics (cobots) and generative artificial intelligence (Nahavandi, 2019). Accelerating technological progress radically shortens the half-life of professional knowledge; educational systems must therefore transition from linear knowledge transmission to agile lifelong learning that integrates reskilling and upskilling with ethical and environmental responsibility (Demir et al., 2019).

Within this complex and turbulent environment, universities face increasing pressure from both governments and the private sector. They are expected to respond agilely to rapid societal changes, produce graduates who are "job-ready," and expand lifelong

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learning opportunities that reflect generational changes in the labor market, all while preserving their core academic mission, theoretical rigor, and commitment to critical thinking. Within this new paradigm, traditional humanities disciplines are often criticized for their perceived detachment from business realities and their limited immediate applicability in a highly technological world.

However, strong research-based responses to such utilitarian critiques have emerged. Aoun (2017) argues that higher education institutions must fundamentally redesign their educational models in order to produce graduates who are "robot-proof" in the age of artificial intelligence. According to Aoun, the primary goal of education should not be the transmission of factual knowledge or technical skills alone but rather the cultivation of uniquely human cognitive and emotional capacities, including cultural agility, systems thinking, and creativity—competencies that machines and algorithms cannot easily replicate.

From a broader philosophical perspective, Nussbaum (2010) emphasizes the importance of humanistic imagination, critical thinking, and ethical reflection as essential prerequisites for an innovative and democratic society. These arguments closely align with the findings presented by Deming (2017). Through a quantitative analysis of labor market developments, Deming demonstrates that the largest wage premiums and employment growth over recent decades have occurred in occupations requiring advanced social and communication skills, areas in which autonomous systems continue to perform poorly. The importance of these so-called soft skills, or transferable competencies—including problem analysis and solving, negotiation, adaptability, empathy, and interdisciplinary communication—is further confirmed by reports of the World Economic Forum (2023), which identify analytical and creative thinking as among the most important competencies of the future. Technical expertise remains essential, but genuine competitive advantage increasingly resides in the human factor. Educational frameworks aligned with Industry 5.0 therefore delineate three interconnected domains of core competencies:

1. **Transversal and human-centric skills**: Cultivating critical thinking, cognitive flexibility, ethical reasoning, and creative problem-solving capabilities in ambiguous environments (Nahavandi, 2019).
2. **Technological literacy for synergistic collaboration (co-working literacy):** Fostering the "augmented operator" (Operator 5.0) paradigm, which entails preparing individuals to interact safely and efficiently with intelligent systems while comprehending the foundational principles of artificial intelligence (Demir et al., 2019).
3. **Sustainability competencies (green skills**): Establishing expertise in the circular economy, eco-design, and carbon footprint mitigation in alignment with broader socio-ecological objectives (Breque et al., 2021).

The case study of the new study program at the University of Ostrava represents a tangible synthesis of these seemingly contradictory yet ultimately complementary demands. The program constitutes an innovative effort to anchor traditional humanities education within the realities of the twenty-first century through a multidisciplinary approach. In doing so, it responds not only to the immediate technological challenges of Industry 4.0 but also, in the spirit of Education 4.0 and the principles of Industry 5.0, proactively develops a graduate profile that is genuinely robot-proof. Graduates are therefore equipped not merely to adapt to emerging technologies but also to critically evaluate and ethically shape a society in

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which the integration of artificial intelligence into everyday work has become the new norm.

2. Theoretical and Conceptual Foundations of Curriculum Modernization

To respond effectively to the macroeconomic and societal challenges described above—characterized by rapid technological innovation and an increasingly dynamic labor market—the study program was designed around several contemporary educational concepts that have gained prominence in higher education pedagogy. The overarching objective is to combine academic depth with maximum professional flexibility.

2.1. The Concept of T-Shaped Skills and Human 4.0

One of the fundamental pillars of the new study program is the **T-shaped skills competency model**. Originally popularized by David Guest (1991) in his search for the "renaissance person" in the field of computing, the concept describes the ideal profile of an adaptable knowledge worker who combines disciplinary expertise with interdisciplinary collaboration. The model was subsequently adopted by innovative design-oriented organizations (Brown, 2010), which identified it as a key prerequisite for the effective functioning of multidisciplinary teams.

The structure of the model is based on two inseparable dimensions:

- **Vertical dimension (deep expertise)**

This dimension represents specialized analytical knowledge within a particular discipline, which is essential for innovation and the solution of complex problems (Oskam, 2009). In the context of the study program presented here, it refers to a strong foundation in the humanities, including a deep understanding of society, ethics, history, and psychology. This dimension provides graduates with disciplinary credibility and expert authority.

- **Horizontal dimension (broad transferable capacity)**

This dimension symbolizes transferable competencies, interdisciplinary communication skills, cognitive flexibility, and empathy. As demonstrated by Deming (2017), the importance of social skills and the ability to connect diverse domains of knowledge continues to grow rapidly in the labor market, largely because these competencies remain highly resistant to automation. Closely linked to this competency framework is another core pillar of the program: the concept of the **human factor in the digital age**, commonly referred to as **Human 4.0**. While Industry 4.0 focuses primarily on the integration of cyber-physical systems and artificial intelligence, the Human 4.0 perspective emphasizes the enduring value and centrality of human beings within an increasingly technology-saturated world (Barnett, 2000). This perspective is consistent with the conclusions of the World Economic Forum (WEF, 2020), which argues that technological advancement inevitably increases demand for uniquely human competencies.

Consequently, the program deliberately cultivates critical thinking, ethical judgment, and complex problem-solving abilities as key competitive advantages for graduates. These competencies function as an overarching framework that complements and enhances their disciplinary expertise.

2.2. Flexible Learning and the Rise of Micro-Credentials

A significant innovation currently at the center of both European and global educational policy discussions is the modularization of learning and the associated use of **micro-credentials**. From the perspective of a rapidly evolving labor market, traditional

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linear models of higher education are often perceived as overly lengthy and inflexible. As Gallagher and Palmer (2020) argue, higher education institutions must transform toward more agile structures capable of supporting continuous upskilling and reskilling throughout an individual's professional life.

For this reason, the European Commission (2022) strongly promotes the implementation of micro-credentials as a key policy instrument. These credentials provide formal, standardized, and employer-readable recognition of specific newly acquired skills and competencies. Their integration into formal education systems represents a substantial shift in approaches to lifelong learning and employability enhancement.

This trend is further supported by the recent review study conducted by Woods and Woods (2023), which documents how modularized educational structures improve permeability between universities and labor market demands. Their findings suggest that micro-credentials enable students to:

- respond continuously to emerging technological and societal developments (Oliver, 2019);
- obtain validated evidence of competencies before completing a full academic degree;
- build highly personalized portfolios of knowledge and skills aligned with their individual career trajectories.

The study program at the University of Ostrava deliberately incorporates these principles by offering students the opportunity to earn selected micro-credentials as part of their regular degree studies. This approach supports student progression and degree completion by enabling learners to acquire recognized credentials throughout their studies and to demonstrate labor-market-relevant competencies prior to graduation. In this way, the program effectively combines the traditional academic rigor represented by the vertical dimension of the T-shaped model with the practical and flexible certification of competencies embodied in its horizontal dimension—competencies that are increasingly demanded by contemporary employers.

3. Research Methodology and Program Evaluation

The present study employs a case study research design to investigate the newly accredited degree program Applied Humanities for the Labor Market, implemented at the Faculty of Arts, University of Ostrava. The primary objective is to analyze and theoretically frame this innovative approach to humanities education. The methodological framework is structured across two main dimensions: first, it analyzes historical empirical data from preceding educational projects upon which the program is built; second, it delineates the architecture of a comprehensive evaluation framework designed for the new curriculum.

3.1. Sources of Empirical Data and Institutional Know-How

The conceptualization of the new degree program did not emerge de novo; rather, it is robustly underpinned by verifiable data and extensive longitudinal experience derived from projects previously administered by the program guarantors and the host department. Both quantitative and qualitative data informing the program design were primarily acquired from the two-semester HR – Personnel Consultant module. Between 2015 and 2025, this module was delivered across ten cohorts and successfully completed by over 250 students across all faculties of the University of Ostrava. The model's practical efficacy is evidenced by the fact that

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approximately two-thirds of these graduates secured direct employment in human resources (HR) roles.

This institutional know-how was further expanded and validated through the development of the two-semester distance learning program HR-Expert, specifically tailored for industry professionals, thereby deepening the nexus between academia and the corporate sector. The international dimension of these initiatives is equally significant, represented by the semester-long modules Transferable Work Competencies I and II. Since 2022 (comprising eight completed cohorts to date), the University of Ostrava has conducted these modules in close cross-border collaboration with Trnava University and the Slovak University of Technology in Bratislava.

3.2. Evaluation Framework and Competence Validation

Quality assurance and the maintenance of curricular agility are predicated on a systematic and comprehensive evaluation framework. This process extends beyond traditional student course evaluations and is methodologically augmented by the structured collection of feedback from external stakeholders and partner institutions (e.g., the Centre for Higher Education Studies). A critical instrument in this regard is the implementation of a 360-degree feedback mechanism, enabling the program to function as a dynamic educational ecosystem that continuously adapts to evolving labor market demands.

A key element of the evaluation methodology concerns the assessment of final academic outputs. Within this program, the traditional theoretical bachelor's thesis is superseded by an applied project addressing a real-world challenge within a specific organization. The evaluation methodology for this project and the student's professional portfolio relies on the principle of dual recognition. Assessment is conducted by a parity-based committee divided equally between academic faculty (50%) and industry practitioners (50%). This approach, combining academic standards with professional insights, serves as a pivotal mechanism for the formal validation of acquired competencies.

4. Modular Program Architecture

The modular architecture of the Applied Humanities for the Labor Market program provides a flexible educational framework aligned with the demands of Industry 4.0 and 5.0. Through the integration of thematic blocks, micro-credentials, project-based learning, and internships, the curriculum cultivates a T-shaped graduate profile. This approach synthesizes a broad foundational understanding of the humanities with targeted professional specialization, thereby ensuring a seamless transition into the workforce.

4.1. Organization of Teaching Across Four Academic Years

The new modular study program is primarily structured around three thematic domains: **Human Resources (HR), Public Affairs (PA), and Public Relations (PR)**, with the latter also encompassing communication and the fundamentals of marketing. Competency development across the four years of study is organized as follows:

Year 1 – Human Resources

The first year focuses on organizational culture, strategic management, performance management, and career development. Students are introduced to core HR processes, recruitment marketing, project management, labor law and constitutional law, personality

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psychology, introductory sociology, wage economics, and project management. The curriculum also includes an initial field-based placement experience.

Year 2 – Public Affairs

Students develop competencies in information management across online and offline environments as well as methods of applied research. These areas are complemented by courses in modern history, philosophy, sociology of technology, civil law, business corporation law, economics, and social psychology.

Year 3 – Public Relations, Communication, and Marketing Fundamentals

The third year emphasizes communication-oriented subjects, including intercultural communication, internal and external communication, and crisis communication. Students also study public relations strategies, presentation skills, marketing fundamentals, and participate in practical PR workshops. Additional topics include gender, sexuality, age, and society. The year incorporates mandatory professional placement activities followed by recommended elective internship opportunities.

Year 4 – Contemporary Issues and Synthesis

The final year integrates practical experience with the study of digital society and artificial intelligence, contemporary issues in modern history, international relations, and economic policy. Students are encouraged to undertake additional elective professional placements that further support the integration of academic and workplace learning.

4.2. Innovative Pedagogical Approaches and Work-Integrated Learning (WIL)

Work-Integrated Learning (WIL) represents a paradigmatic shift in higher education. Rather than treating academic learning as an isolated activity, WIL emphasizes the creation of hybrid learning environments in which students actively develop their professional identities.

A central principle of this approach is the recognition of workplace practice as a legitimate source of knowledge. Billett (2009) demonstrates that the educational value of workplace experiences lies in their capacity to expose students to authentic tasks and social interactions that academic institutions cannot fully replicate. The close integration of academic and workplace environments significantly shortens the transitional period required for graduates to adapt to their first professional positions.

This model is further supported by Eraut and Hirsh (2007), who emphasize the importance of learning through work, where reflective engagement with practical experience constitutes a key mechanism of professional development. According to Jackson (2015), within an employability-focused curriculum, workplace practice is not merely an addition to formal study but a constitutive element of the curriculum itself, fostering not only technical competencies but also critical thinking in real-world contexts.

4.2.1. Agility, Co-Teaching, and the Co-Construction of Knowledge

Traditional lecture-based teaching models are increasingly being replaced by **co-teaching approaches**, in which the theoretical expertise of academic staff is combined with the practical experience of industry professionals. Baeten and Simons (2014) argue that co-teaching should not be understood merely as an organizational arrangement but rather as a process of knowledge co-construction.

The modular structure of the study program reflects the principles of an **agile curriculum**, enabling rapid adaptation and reconfiguration of content. In fields

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where knowledge becomes obsolete within a matter of months, the involvement of external experts is essential for maintaining curricular relevance and currency.

Program agility is supported by a systematic and comprehensive evaluation framework. Quality assurance extends beyond standard student surveys and incorporates feedback from external stakeholders and partner institutions. For example, collaboration with organizations such as the Centre for Higher Education Studies contributes to continuous program development. Through the systematic use of 360-degree feedback, the program functions as a living educational system that continuously adapts to labor-market needs.

4.2.2. The Mentorship-Based Educational Model and the Redesign of the Final Degree Project

The program structure includes more than 1,700 hours of professional practice, representing a transition from the model of the "student as listener" to that of the "student as professional practitioner."

This approach, referred to as the **mentorship-based educational model**, draws upon social learning theory (Lave & Wenger, 1991), according to which learning occurs through legitimate peripheral participation within communities of practice. At the same time, it relies on systematic preparation, training, and networking of workplace mentors within participating organizations.

This competency-based partnership creates a practice environment that emphasizes not only the quantity of internship hours but also the quality of learning experiences and outcomes. Mentors serve as facilitators who help bridge the gap between abstract theoretical knowledge and operational practice.

The replacement of the traditional theoretical bachelor's thesis with the solution of a real organizational problem—an **industry-based project**—reflects the growing need to transform academic outputs into applied outcomes. Patrick et al. (2008) demonstrate that such projects increase both student motivation and the quality of outputs, as students are accountable to real clients who provide continuous feedback throughout the process.

Furthermore, the project itself functions as a strong motivational mechanism encouraging sustained engagement in workplace placements and elective internship activities. The final assessment of the project and professional portfolio is conducted by an evaluation panel composed equally of academics (50%) and industry professionals (50%). This model represents a form of competency validation through **dual recognition**, combining academic and professional assessment.

Such an approach aligns with broader international trends in professionally oriented bachelor's programs and practice-based higher education models, including those commonly found in the German and Austrian *Fachhochschule* systems. As a result, graduates leave the program not only with a bachelor's degree but also with three micro-credentials, substantial practical experience, strong professional networks, and a clearer sense of career direction.

4.2.3. Industry Partnerships

Without close cooperation with external stakeholders, a professionally oriented study program could not function effectively. The University of Ostrava therefore places strong emphasis on developing deep regional partnerships.

Collaboration extends far beyond the provision of internship opportunities. External partners actively participate in the co-creation of the curriculum, while practitioners contribute directly as guest lecturers and instructors. At the same time, the program serves

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as a platform for networking, talent identification, and recruitment activities, enabling the university to function as an effective intermediary between emerging talent and the labor market.

Partnerships encompass a broad range of organizations, including private-sector companies, public administration bodies, cultural institutions, and non-profit organizations.

Conclusion

The debate concerning the purpose of higher education has historically oscillated between the ideals of purely academic education and narrowly vocational or professional training (Barnett, 2000). The case study of the study program at the University of Ostrava demonstrates, however, that these two approaches need not be regarded as mutually exclusive. By replacing the traditional theoretical degree thesis with the solution of real organizational problems and by extensively integrating Work-Integrated Learning (WIL) through more than 1,700 hours of professional practice, the Faculty of Arts has developed an educational model that is resilient to the disruptive forces associated with Industry 4.0.

Through this proactive approach, the *Applied Humanities for the Labor Market* program contributes to the development of graduates who possess a strong ethical, historical, and humanistic foundation while simultaneously acquiring advanced competencies in communication, human resource management, and contemporary organizational practice. The integration of micro-credentials, together with block-based co-teaching involving substantial participation of industry professionals and the inclusion of practitioners as equal members of final assessment panels, represents a bold and innovative step in curriculum design.

The model presented here has the potential to serve as a transferable framework for other humanities faculties across Central Europe, provided that its implementation is adapted to local and regional conditions. In this respect, the program demonstrates how traditional humanities education can remain academically rigorous while responding effectively to the changing demands of contemporary labor markets and the broader societal transformations associated with the digital age. The potential development of the programme and its future transformation are strongly oriented toward the field of lifelong learning, particularly processes of qualification enhancement and renewal (upskilling and reskilling), delivered in a flexible manner that also takes into account the specific characteristics of different cultural generations. The modular thematic structure of the proposed programme provides an ideal foundation for its further development into smaller, stand-alone educational units culminating in micro-credentials, which can be flexibly offered to a broader audience within the framework of lifelong learning.

The modularisation of study pathways and the implementation of agile certification mechanisms can significantly enhance permeability between higher education and the labour market. At the same time, this approach enables learners to respond continuously to emerging trends and evolving workforce demands. Such an ongoing transformation of the curriculum fully aligns with the principles of the Education 4.0 paradigm, which seeks to foster competencies required for the digital economy while emphasising adaptability and flexibility.

However, the program's ambitions transcend this technological framework, proactively reflecting the emerging paradigm of Industry 5.0. By restoring the human factor to the center of focus and emphasizing ethical grounding, intergenerational

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collaboration, and sustainability (Breque et al., 2021), it equips graduates for a synergistic coexistence with advanced technologies.

In the context of an ageing population, this transformation of educational content can facilitate a shift towards highly personalised learning approaches and the creation of tailored educational pathways. These pathways can accommodate and reflect the specific strengths and limitations of different cultural generations participating in the labour market, particularly within the regional context. Through this concept, the University of Ostrava has the potential not only to fulfil the role of a traditional academic institution but also to evolve into an agile platform for the sustainable development of human capital throughout individuals' professional careers within the Moravian-Silesian Region.

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