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Meta-Competencies in Economy 4.0: Self-Awareness, Self-Development, and Coaching as a Soft Competence Development Toolkit

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Abstract:

Purpose: *This article aims to pinpoint the key competencies of the future requisite for navigating towards Economy 4.0 and its major changes to the job market. Emphasis is laid on the significance of self-awareness and self-development as meta-competencies that drive the operational efficacy at both individual and organisational level. The authors also highlight how coaching has emerged as a strategic tool for building soft skills, particularly relevant for Economy 4.0, where cognitive, social, adaptability skills are increasingly taking centre stage.*

Design/Methodology/Approach: *This article draws upon a critical analysis of literature encompassing socio-economic megatrends, tomorrow's competencies, and instruments supporting the professional development of individuals and organisations. The study incorporates empirical research findings gathered from 86 employees representing diverse organisational types. The collected data underwent statistical analysis employing fundamental descriptive measures, which helped gauge how respondents rated their own skills, how self-aware they were about their development needs, and what types of professional training and development they preferred.*

Findings: *Research findings indicate that respondents demonstrate high self-evaluation of their professional competencies, encompassing theoretical and practical aspects, expertise, and accountability for assigned tasks. Social and emotional competencies received similarly elevated assessments, particularly interpersonal skills, motivational capacities, and adaptive abilities. In contrast, coaching, job rotation, and mentoring are named less frequently, despite being perceived as valuable instruments for fostering the development of soft skills. The obtained results corroborate that self-awareness and self-development constitute pivotal competencies, enabling effective performance amid dynamic economic and technological transformations.*

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Practical Implications: *The findings underscore the imperative for implementing a systemic approach to employee competency development. It should blend formal and informal learning, tailor growth plans to the individual, and strategically employ tools like coaching, mentoring, and blended learning. Organisations that cultivate a culture conducive to self-awareness, reflectivity, and lifelong learning acquire the tangible capacity to mitigate the skills gap, enhance innovative potential, and establish a durable competitive edge within the digital economy landscape.*
Originality/Value: *The article offers substantial value by integrating a theoretical perspective on megatrends and future skills with empirical findings examining employees' self-assessment of competencies and the developmental practices that they pursue. The study's key contribution is the strong emphasis on self-awareness and self-development framed as top-tier competencies that underpin adaptability, learning capacity, and effective functioning in a dynamic professional setting*

Keywords: *Self-awareness, self-development, future skills, soft skills, coaching, Economy 4.0, Fourth Industrial Revolution.*

JEL codes: *J24, M53, O15.*

Paper Type: *Research article.*

1. Introduction

Socioeconomic history is punctuated by several turning points that have shaped the trajectory of civilisation for generations to follow. The multidimensional changes that can still be witnessed today began with the eighteenth-century Industrial Revolution, fuelled by the widespread adoption of scientific discovery and invention.

With the advent of the twenty-first century, the Fourth Industrial Revolution began (Schwab, 2016; Shabur, 2024; Rosak-Szyrocka *et al.,* 2024), marked by the rapid development and growing use of information and communication technologies. Economy 4.0 centres on the synergy between humans and advanced technologies, such as artificial intelligence and collaborative robots (cobots) (Islam *et al.,* 2025; World Economic Forum, 2025). By keeping the human at the centre, this perspective stresses that technology should ultimately serve collective well-being, and that progress must rest on values such as openness and innovation (Islam *et al.,* 2025).

Every phase of development brings a new set of megatrends – enduring economic, social, environmental, and technological forces that influence global society, the world economy, and the natural environment.

Changes in employment patterns and labour-market dynamics, along with forecasts of how workforce competencies will develop, serve as a window into broader socio-economic transformation.

2. Labour Market Transformations: Tomorrow's Challenges

One of the key analyses of global labour-market trends is the World Economic Forum's *Future of Jobs Report 2025*. The authors highlight that by 2030 the labour market will face a profound transformation: 92 million jobs are expected to be displaced, while 170 million new roles – mostly in tech-driven sectors – are projected to emerge. Altogether, these changes are expected to touch the working lives of nearly 1.2 billion people around the globe.

The ongoing transformation entails a number of significant consequences. Although the projected increase in the number of jobs is positive, the road ahead will not be anything but straightforward. The key obstacles will include a widening skills gap, a shortage of talent, and the challenge of hiring workers who can adapt quickly and embrace change. Demographic pressures add another layer of complexity – especially ageing societies and the shrinking pool of working-age population, a trend most visible in highly developed countries (World Economic Forum, 2025).

The labour market is steadily steering toward innovative, digital transformations that shape broadly understood progress and remain highly sensitive to the megatrends driving socio-economic development. The real challenge is identifying the competencies that people need – not only to make sense of these changes but also to adjust to them swiftly and with agility.

In such a dynamic landscape, well-developed social skills are becoming central to both job performance and innovation (Bone, Ehlinger, and Stephany, 2023). In the context of Enterprise 4.0, marked by digitised processes and team-based work carried out under conditions of heightened uncertainty (see *Kompetencje społeczne pracowników w Przemyśle 4.0*, 2024), key competencies increasingly include interpersonal communication, teamwork and collaboration, leadership, empathy, creativity, self-awareness, and emotional self-control (Goleman, 2023).

The Future of Jobs Report (World Economic Forum, 2025) offers one of the clearest answers to the question of which skills will matter most in the coming years. Its authors compile a list of the Top 10 Skills for 2025 and additionally indicate how, according to their projections, this list will evolve over the following five years, that is, by 2030.

Out of the 26 competencies identified in the report, the ten most sought-after include: (1) analytical thinking, (2) resilience, flexibility and agility, (3) leadership and social influence, (4) creative thinking, (5) motivation and self-awareness, (6) technical literacy, (7) empathy and active listening, (8) curiosity and life-long learning, (9) talent management and (10) service orientation and customer service. The authors also predict which competencies will continue to grow in importance. AI and big data, analytical thinking, creative thinking, resilience, flexibility, and agility, as well as technological literacy, are expected to become even more significant.

At the same time, leadership and social influence, curiosity and lifelong learning, systems thinking, talent management, and motivation and self-awareness will become increasingly vital, reflecting the continued focus on the human factor in an era of fast-moving technological change (World Economic Forum 2025).

A comparable set of in-demand workforce skills – shifting toward innovative, digital, and tech-enabled solutions and characterised by constant change – is outlined in the report, *Kompetencje Przyszłości 2025* (Wiśniewska E., Rosik-Ogłaza E., 2025). The publication identifies six competency areas, designated as the meta-competencies of the future. These areas include:

1. innovation and complex problem-solving;
2. building emotional intelligence and mental resilience;
3. working effectively in virtual teams and communicating in digital settings;
4. adapting quickly and smoothly to change;
5. staying committed to ongoing self-development; the ability to cross competencies, that is, spotting links between different skill sets and drawing on knowledge from multiple domains (individuals who can "cross" skills in this way are often labelled high-potentials, as they can apply a wide range of capabilities across various scenarios);
6. future-ready leadership, meaning the capacity to lead effectively in driving an organisation's digital transformation.

A comparable perspective appears in the latest literature review on engineering competencies in the Industry 4.0 landscape by Rosas Quintero and Namuche Maldonado (2024). The authors argue that the most valuable skills now combine technological proficiency with critical thinking, creativity, and the ability to work effectively across multidisciplinary teams. This trend underscores a broader shift from narrow technical qualifications toward integrated, multidimensional competency profiles.

3. Competencies as an Analytical Lens: An Overview of Key Definitions and Perspectives

A review of the literature shows that no single definition of competence can be found that fully captures the complexity of the concept. One reason is that researchers from many different social-science and humanities fields approach and interpret the concept in distinct ways. The term "competence" was first introduced by White (1959), who linked it to social skills – abilities that enable effective interaction with one's surroundings (White, 1959).

McClelland, to whom the first explicit definition of the term is often attributed, emphasised the importance of characteristics such as motivation and self-perception in shaping human behaviour, thereby challenging the prevailing assumption that intelligence was the primary determinant of human effectiveness (McClelland, 1973).

Boyatzis (1982) later defined competence as an individual's ability to exhibit behaviours that meet the demands of a job position within a specific organisational context, thereby producing the expected outcomes. He also points out that showing one's competencies at work depends on a range of contextual factors, including organisational culture, structure, etc.

A similar understanding of competence is proposed by Lévy-Leboyer (1997), who defines it as the integrated use of acquired knowledge, skills, abilities, and personality traits, along with typical behaviours and standard procedures, for the successful performance of complex tasks.

It is also useful to note the perspective offered by Król (2006, p. 82). He defines competencies as predispositions encompassing knowledge, skills, and attitudes that ensure the execution of professional tasks at an effective or distinguished level, in accordance with the standards established by the organization for a given role. Subsequent years have seen new approaches to defining competencies, which remain heterogeneous and composed of various elements; yet most of these definitions consistently highlight knowledge, skills, and attitudes.

The abundance of definitions naturally leads to a broad variety of competency typologies. One of the most frequently cited typologies is the classification proposed by Katz (1974, pp. 90-102). It identifies three types of competencies:

1. technical skills – necessary for daily work and solving technical problems, as well as decision-making requiring expertise;
2. social skills – related to effective functioning in interpersonal relationships, including building relationships, communication, understanding motivation and attitudes of others;
3. conceptual skills – involving the ability to analyse and synthesize information, draw conclusions, make sound decisions, creatively solve problems, and develop action plans.

Today's labour market, driven by rapid technological shifts, globalisation and accelerating digitalisation, poses new challenges for employees. It requires labour-market participants to possess not only well-developed, specialised professional qualifications, but above all a high degree of self-awareness about the need for continuous learning and the ability to adapt to constant change (Brzezińska, 2024). Self-development should be understood as an individual strategy through which a person builds their career and position in the labour market (Zawadzka, 2024).

4. Self-Awareness and Self-Development: Key Competencies of the Future

In a turbulent environment, so-called soft skills gain particular significance. They include a spectrum of cognitive, emotional, and social abilities that complement domain-specific knowledge (Pino Tarraggo *et al.,* 2025). They relate to traits used in interpersonal interactions and help build a social network (Itani and Sprour, 2015).

Examples of soft skills include interpersonal skills, self-discipline, openness, and creativity (Hassan *et al.,* 2024; Balcerzyk and Karczewski, 2022). It is emphasized (de Campos *et al.,* 2020) that soft skills also encompass behaviours beyond purely relational ones, such as social responsibility, ethics, and emotional intelligence.

Self-awareness and an ability to recognise emotions, values and attitudes directly shape a person's ability to grow and develop. Self-development is a conscious, planned, and long-term effort to broaden one's knowledge, skills, and competencies so as to make fuller use of one's potential (Brzezicki, 2023).

It calls for self-reflection, goal-setting, and consistent action – elements that set it apart from accidental learning (Brzezińska, 2024). Deci and Ryan (2023) note that self-development is rooted in intrinsic motivation – the inner need for autonomy, competence, and social relatedness. High motivation for self-development promotes cognitive flexibility, better stress management, and higher job satisfaction (Mäkelä and Stephany, 2024).

Individuals who develop their interpersonal skills adapt more quickly to changes, take initiative more often, and are more innovative (Mäkelä and Stephany, 2024). As automation and AI reshape the world of labour, self-development becomes crucial for faster acquisition of new qualifications and flexible career adjustment (OECD, 2024).

5. Self-Awareness in Competence Development: Analysis and Interpretation of Research Findings

As demonstrated earlier, developing soft skills enhances a person's employability by reinforcing their sense of agency (Brzezińska, 2024). Employees who actively cultivate self-development become a strategic asset – they drive innovation, collaboration and help build trust inside the organisation (Stachowicz-Stanusch, 2023). Investment in soft-competence development is associated with higher levels of employee engagement, organisational loyalty, and a competitive advantage (Alvesson and Spicer 2023).

From a researcher's standpoint, it is intriguing to explore how employees evaluate their own competencies and which development methods they resort to. Some insights were collected during a study carried out between May and June 2025 among a selected group of employees. The study employed the diagnostic survey method, using a questionnaire-based technique and a structured survey. The tool, designed by the authors, included seven closed questions and a demographic section; the questionnaire was anonymous. Respondents rated the questionnaire statements on a five-point scale.

The analysis drew on basic descriptive statistics, which made it possible to present the results in terms of mean scores for specific groups as well as aggregated overall findings.

One of the specific objectives of the study was to "analyse and assess employees' competencies, as well as the forms and methods of professional development." A total of 86 respondents took part in the study, of whom women accounted for 52.3%. Participants were divided into three age categories: up to 35 years (30.2%), 36-45 years, and over 45 years (34.9% of the sample each).

Respondents also varied in terms of job tenure: employees with up to five years of job experience constituted 24.4% of the sample; those with six to 10 years accounted for 38.4%; respondents with 11 to 15 years represented 27.9%; and individuals with more than 15 years of tenure made up 9.3% of the group.

In terms of educational attainment, the sample was dominated by employees with secondary (36.1%) and higher education (32.6%). Vocational or lower-level education was reported by 21.39% of respondents. To assess the participants' competency levels, their self-evaluations of professional skills and attitudes were analysed. Table 1 shows the results for the variables capturing both hard and soft skills.

The highest self-assessment score was reported for "performance of assigned tasks" (M = 4.93), suggesting that respondents display a strong sense of responsibility and a high degree of reliability in their professional roles. The analysis further indicates that similarly high mean values were observed for aspects related to the respondents' level of knowledge. Theoretical preparation received a high assessment (M = 4.81), practical preparation followed closely (M = 4.71), and specialist knowledge, although slightly lower, still achieved a solid score (M = 4.47).

This pattern of results shows that respondents rate their cognitive competencies highly – both in terms of strong theoretical grounding and the ability to put knowledge into practice. These findings may be interpreted as an expression of the respondents' (self-)awareness of their professional competencies and their conviction of having adequate substantive preparation for performing assigned tasks.

The high mean values may also suggest that the respondents operate in an environment that supports the growth of specialist knowledge and practical skills, which, in turn, reinforces their sense of professionalism and occupational effectiveness.

Interpersonal skills (M = 4.27) and self-motivation (M = 4.00) also scored well above the midpoint of the scale, showing that respondents possess a solid level of soft skills. It suggests that they are able to initiate and sustain social relationships effectively, collaborate efficiently with others and draw on an inner sense of motivation. Goleman (2023) notes, emotional and interpersonal competencies constitute a key determinant of professional success, shaping team effectiveness, conflict-resolution capacities, and the ability to build a work environment grounded in trust and engagement.

Furthermore, the high mean scores for the statements “I like to learn new things” (M = 3.94) and “I wish to build up my value on the labour market” (M = 3.81) indicate respondents’ strong orientation towards personal and professional development. The results suggest a proactive approach to learning and self-improvement, as well as an awareness of how important continuous skill-building has become in a changing labour market.

Viewed more broadly, the findings indicate that participants possess a solid set of socio-emotional competencies which, following Goleman’s model, form the basis for effective performance at work. Their development-oriented mindset points to a readiness for lifelong learning – a key requirement in the fast-evolving landscape of Economy 4.0 and the rising importance of future skills. Significant values were also recorded in the areas of collaboration and knowledge sharing (M = 3.24), as well as readiness to join various forms of professional development (M = 3.31).

Moderately high scores for adaptability and openness to change (M = 3.38) are particularly noteworthy in today’s fast-paced labour market, which demands flexibility, mental resilience, and an openness to innovation (OECD, 2024; World Economic Forum, 2025). Similarly, solid scores for work planning (M = 3.58) and time management (M = 3.56) show that respondents are well-organised, capable of prioritising tasks and effective in managing resources – core ingredients of high professional performance (Goleman, 2023).

The study also included negatively worded statements addressing passive attitudes and reluctance to take responsibility. The mean scores for “I often let others take control” (M = 2.34) and “I find it difficult to assume responsibility” (M = 2.59) were relatively low. These results suggest that respondents demonstrate a strong sense of agency, autonomy in action, and a readiness to shoulder responsibility for their professional decisions.

Overall, the results point toward a proactive, action-oriented, and control-driven approach to career development. The low score for tendencies to hand over control may also reflect strong self-regulation skills and an internal locus of control, consistent with Rotter’s theory (1966).

From the perspective of psychosocial skills, these results reflect a mature professional attitude – one that balances autonomy with responsibility. Such a mindset is a valuable asset in today's organisational settings, which rely on collaboration, innovation, and autonomous action. It also supports intrinsic motivation and long-term career development.

Table 1. *Self-assessment of competences held*

	M	SD	Me	Min	Max	V
I am committed to my work	3.38	0.77	3	2	5	22.74
I am able to work in a team	3.60	0.87	3	2	5	24.18
I attach attention to colleagues' opinions	3.64	0.89	4	2	5	24.54
I perform assigned tasks	4.93	0.26	5	4	5	5.20
I plan/organise my work well	3.58	0.85	3	2	5	23.64
I am motivated to work	3.41	0.86	3	2	5	25.22
I wish to participate in various forms of professional development	3.31	0.90	3	1	5	27.09
I share knowledge and experience with others	3.24	0.93	3	1	5	28.74
I can evaluate my own work objectively	4.03	0.42	4	3	5	10.37
I possess theoretical knowledge needed to perform my tasks	4.81	0.45	5	3	5	9.30
I possess practical skills needed to perform my tasks	4.71	0.61	5	3	5	12.97
I develop my qualification	3.05	0.80	3	1	5	26.12
I work well in a team	3.44	1.05	3	1	5	30.42
I often let others take control*	2.34	0.92	3	1	4	39.16
I find it difficult to assume responsibility*	2.59	0.86	3	1	4	33.14
I am not afraid of changes	3.38	0.94	3	2	5	27.64
Intellectual development is very important to me	3.49	0.88	3	2	5	25.16
I like to learn new things	3.94	0.52	4	3	5	13.11
I am able to self-motivate to work	4.00	0.63	4	3	5	15.81
I am not a lazy person*	1.29	0.65	1	1	4	50.23
My technical skills are highly developed	3.60	0.91	4	2	5	25.28
I have solid interpersonal skills	4.27	1.00	5	2	5	23.41
I am able to manage time well	3.56	1.00	5	2	5	23.41
I possess high-level specialist knowledge	4.47	0.79	5	2	5	17.75
I wish to build up my value on the labour market	3.81	0.96	4	2	5	25.28

Note: *M – arithmetic mean; SD – standard deviation; Me – median (middle value); Min – minimum value; Max – maximum value; V – coefficient of variation (%)*
Source: *Own elaboration based on the research data.*

The analysis conducted thus far indicates that the respondents tend to assess their knowledge at a relatively high level, recognise the need to strengthen their competencies and feel motivated to do so. This raises an important question about the tools they rely on when planning to enhance their skills.

Employee training covers programmes that offer workers new information, new skills, or opportunities for professional advancement (Karim, 2019, p. 8-14). It is a purpose-designed process of modifying attitudes, knowledge, skills, or behaviour through learning experience with a view to achieving effective performance in a specific task or set of tasks (Laing, 2021, p. 1-12). Through regular and valuable training sessions, employees can be more productive, more focused on the core competencies within the organisation, which should drive the success factor within the industry (Menolli, 2020, p. 1140-1155).

On-the-job training covers a range of methods, including demonstrations, coaching, job rotation, planned experience acquisition, and mentoring (https://mfiles.pl/pl/index.php/Metody_szkoleń); in contrast, off-the-job formats include lectures and presentations, conferences and videoconferences, programmed instruction, games and simulations, case studies, workshop sessions, e-learning and action learning (Błaszczak, 2020, p. 129-143).

Table 2. *Forms of on-the-job training*

	N=86	%
Demos	15	17.44
Coaching	11	12.79
Job rotation	2	2.33
Planned experience acquisition	55	63.95
Mentoring	1	1.16

Source: *Own elaboration based on the research data.*

The results show that almost 64% of respondents intentionally plan their development. This approach helps them retain a sense of control over the process, reduces uncertainty and impulsiveness, and supports the effective pursuit of goals along with the systematic improvement of their competencies. Demonstrations ranked second (17.44%) as a traditional form of workplace instruction that allows employees to observe and replicate desirable behaviours at work. Coaching was identified by 12.79% of respondents. The least frequently selected methods included on-the-job training, job rotation (2.33%) as well as mentoring (1.16%).

6. Coaching as a Tool Supporting Competence Development

In the conducted study, the respondents identified coaching among the tools employed in their competence development. This finding is particularly noteworthy given that, for many years, coaching has been linked primarily to the development of senior and middle-level managerial competencies. It is a highly effective tool for developing soft skills, deepening self-understanding, improving performance, and helping individuals plan the consecutive stages of their personal and professional growth.

The history of coaching is, however, only sparsely addressed in the literature. Sheila Kampa-Kokesch and Mary Z. Anderson (2001: 207) trace the origins of coaching to early interventions in consulting and counselling (psychological guidance). In the 1960s, the term was frequently used to describe confidential psychological assistance offered to managers. A significant development occurred in the 1980s when coaching branched into two main streams – business coaching and personal (life) coaching (Kampa-Kokesch and Anderson, 2001). In scholarly literature, the earliest definitions of coaching surfaced in the early 1990s, portraying it as a teaching process.

Eric Parsloe (1995: 18), one of the first authors of the definition, stressed the instructional approach, "Coaching is directly concerned with the immediate improvement of performance and development of skills by a form of tutoring or instruction." Robert Dilts has made a landmark contribution to the development of coaching. His definition reads, "Coaching involves various ways of helping people to achieve more effective actions than before.

Coaching with a lowercase 'c' focuses on behaviour level, referring to helping another person obtain or improve a specific action...Coaching with an uppercase 'C' involves helping people effectively achieve goals on various levels, emphasizing productive change through strengthening identity and values, and realizing dreams and goals" (2003: XXIII).

The word coaching literally derives from English and means "moving from one place to another," which, when speaking of work, most often symbolizes "moving forward or making a change" (Starr, 2003). Regardless of the conceptual framework adopted, coaching is fundamentally associated with growth and development. It builds self-confidence and reinforces the sense that people can actively shape their professional reality.

A coaching method tailored to the needs of a specific person has a substantial impact on knowledge acquisition, thus fostering independent thinking and autonomous decision-making. These qualities translate into the capacity to identify more effective solutions to emerging problems. Organisation-wise, coaching promises higher employee satisfaction, smoother collaboration, and a higher level of efficiency and profitability (Syper-Kosowska and Rachwał, 2012).

7. Conclusions

The Fourth Industrial Revolution is rewriting the rulebook of today's economy and, with it, the landscape of work and human capital. Economy 4.0, driven by automation, artificial intelligence and cyber-physical systems, departs from the paradigm of stable, routine competencies and shifts the emphasis towards dynamic capabilities – those that enable individuals and organisations to adapt to volatility, uncertainty, and complexity.

Against this backdrop, future skills are gaining in significance – meta-competencies like critical thinking, lifelong learning, emotional intelligence, teamwork, and creativity. Of particular importance is the growing recognition of self-awareness and self-development, which operate as a "vehicle" of adaptive and decision-making capacity.

For this reason, coaching – treated as a structured learning process that boosts self-regulation – has effectively moved into the category of strategic development tools. In the Economy 4.0 landscape, future skills are not merely "new skills" but capacities for self-actualisation and reinventing oneself. Taken together, self-awareness, self-development, and coaching create a meta-strategic framework of growth: not only do they help people keep pace with change, but they actually help co-design it.

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