
Competence Taxonomies in Organisations of the Future: From literature-based Classifications to a Hybrid Competence Model

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Abstract:

Purpose: The purpose of this study is to develop a comprehensive and contemporary taxonomy of competencies that reflects the changing requirements of organisations operating in conditions of digital transformation, technological disruption, labour market volatility and increasing social expectations. Building upon classical competency theories and models, the paper seeks to systematise existing approaches to competency classification and to extend them by incorporating digital, adaptive, ethical and communicative dimensions. The study addresses the need for an integrated framework capable of explaining competency requirements in contemporary organisational environments.

Design/Methodology/Approach: The study adopts a theoretical and conceptual research design based on a critical review and synthesis of the literature on competencies, competency models and human capital development. The analysis combines classical international approaches to competency classification with the contributions of Polish scholars linking competencies to labour market dynamics, public sector management, innovation processes, organisational resilience and sustainable development. Through comparative analysis and conceptual integration, the paper develops a multidimensional competency taxonomy and proposes a framework for its practical application.

Findings: The study demonstrates that traditional competency classifications, although still relevant, are insufficient for capturing the complexity of contemporary work environments. The findings indicate the growing importance of competencies associated with digital literacy, adaptability, continuous learning, ethical responsibility, communication and interdisciplinary collaboration. As a result, the paper proposes an original matrix of hybrid competencies that integrates technical, cognitive, social, adaptive and ethical dimensions into a coherent framework. The proposed taxonomy highlights the interdependence of competency categories and illustrates how competency profiles evolve in response to technological, organisational and societal changes.

Practical Implications: The proposed framework may support organisations in designing competency management systems, recruitment and selection procedures, employee

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development programmes and talent management strategies. It can also serve as a tool for assessing workforce preparedness for digital transformation and organisational change. Furthermore, the taxonomy may assist policymakers, educational institutions and public sector organisations in aligning competency development initiatives with emerging labour market requirements.

Originality/Value: *The paper contributes to the competency management literature by proposing an integrative taxonomy that bridges classical competency theory with emerging digital and organisational challenges. Its originality lies in the development of a hybrid competency matrix that combines traditional and contemporary competency dimensions within a single analytical framework. The study advances understanding of competencies as dynamic and interconnected capabilities that support organisational adaptability, innovation and long-term resilience.*

Keywords: *Competence classification, managerial competences, hybrid competences, competences of the future, competence management.*

JEL codes: *J24, M12, M53, O15, D83.*

Paper type: *Research article.*

1. Introduction

The classification of competencies is one of the fundamental tasks of human resource management theory and practice. Without a structured taxonomy, it is difficult to design job profiles, create competency models, conduct recruitment, assess employees, plan training, build succession plans, and develop managerial and staff personnel.

The literature emphasises that competency models should link the language of organisational strategy with observable employee behaviours, as only then can they be used in selection, assessment and professional development (Carroll and McCrackin, 1998, pp. 45-52; Chouhan and Srivastava, 2014, pp. 15-18).

In this context, the taxonomy serves as a map: it indicates which competencies are required, how they are interrelated, and how they can be assessed. At the same time, the concept of competence remains ambiguous.

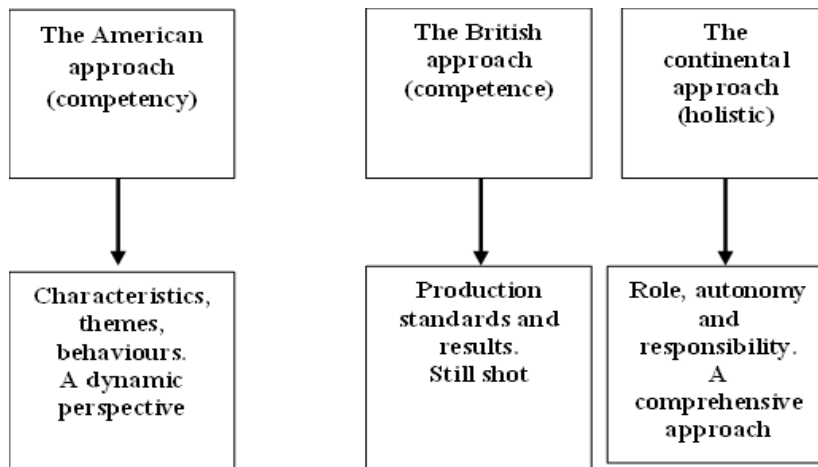
The authors use the categories of hard, soft, social, professional, cognitive, managerial, key, threshold, differentiating, functional and meta-competences. This diversity is cognitively valuable, but in practice it can lead to chaos if not grounded

in a coherent classification criterion (Woodruffe, 1993, pp. 29-31; Delamare Le Deist and Winterton, 2005, pp. 27-30).

This issue is becoming particularly significant in the organisations of the future. Project-based work, distributed teams, digitalisation, artificial intelligence, pressure to innovate and growing ethical demands mean that a simple division into hard and soft skills is no longer sufficient. Most contemporary tasks are hybrid in nature, as they require the simultaneous use of expert knowledge, technology, communication, reflection and responsibility (Tippins and Sohi, 2003, pp. 745-748; World Economic Forum, 2023, pp. 7-11).

The aim of this study is to systematise the main taxonomies of competencies found in management literature and to propose an expanded model of hybrid competencies that is better suited to the conditions of future organisations. This article is a review and conceptual piece. It does not result in a definitive catalogue of competencies, but rather provides an interpretative framework for developing diagnostic tools and staff development programmes within organisations.

Figure 1. *Three interpretative sources of competence taxonomy*



Source: Own compilation based on: Delamare Le Deist, Winterton, 2005, s. 29-40; Winterton, 2009, s. 682-687.

2. The Main Theoretical Approaches to Competencies

The most general classification of competencies draws on three traditions: the American, British and continental traditions. The American tradition, associated with the work of D.C. McClelland, R.E. Boyatzis and L.M. and S.M. Spencer, focuses on the individual and the characteristics that differentiate levels of effectiveness. Competencies are understood here as relatively stable traits, motives,

behavioural patterns and dispositions that allow one to predict effective or above-average performance at work (McClelland, 1973, pp. 1-5; Boyatzis, 1982, pp. 20-23; Spencer and Spencer, 1993, pp. 9-15).

The British tradition is more functional and task-oriented. It emphasises the standard of work performance, measurable outcomes and compliance with the requirements of the profession or role. In this context, competence means the ability to perform a specific task to the expected standard of quality. This perspective is particularly useful in systems of qualifications, certification and job descriptions (Delamare Le Deist, Winterton, 2005, pp. 31–35; Winterton, 2009, pp. 682–686).

The continental tradition, including the German-French approach, is more holistic. It combines knowledge, skills, experience, autonomy, responsibility, professional role and the context of action. Its advantage lies in its ability to integrate technical, social, ethical and developmental dimensions, which is well suited to the conditions of modern organisations (Delamare Le Deist and Winterton, 2005, pp. 35-40; Weinert, 2001, pp. 45-52).

Delamare Le Deist and Winterton (2005) point out that the debate over the concept of competence should not end with the selection of a single tradition. It is more useful to seek a multidimensional model that allows for the integration of task performance, individual characteristics and the capacity for learning. This logic gives rise to the need to construct a hybrid taxonomy, combining the individual, task and organisational context levels (Delamare Le Deist and Winterton, 2005, pp. 39-42; Winterton, 2009, pp. 687-692).

3. Basic Criteria for Classifying Competencies

The most common classification distinguishes between hard and soft competencies. Hard competencies include specialist knowledge, technical skills, and familiarity with procedures, technologies, regulations or tools. Soft competencies relate to communication, collaboration, negotiation, conflict resolution, self-management and leadership.

This division is practical, but is increasingly proving insufficient, as in real-world professional tasks the technical and social elements are interlinked (Chouhan, and Srivastava, 2014, pp. 16-18; Filipowicz, 2019, pp. 41-52).

Boyatzis, followed by Spencer and Spencer, proposed a distinction between threshold and differentiating competencies. Threshold competencies are necessary to perform a job at a minimally acceptable level. Differentiating competencies enable above-average performance and distinguish leaders from average employees. In practice, this implies the need to distinguish entry-level requirements from the actual sources of competency advantage (Boyatzis, 1982, pp. 23-27; Spencer and Spencer, 1993, pp. 15-18).

Winterton (2009) develops a classification based on two axes: function and scope of competence. This allows us to distinguish between cognitive, functional and social competences, as well as meta-competences. The latter group is particularly important, as it encompasses learning, reflectiveness and the ability to develop other competences. In an environment where knowledge rapidly becomes outdated, meta-competences become a strategic resource (Delamare Le Deist and Winterton, 2005, pp. 37-42; Winterton, 2009, pp. 688-694).

The next criterion concerns the level of analysis. Competencies can be classified as individual, team-based, managerial and organisational. Individual competencies are evident in the actions of a specific person, team competencies in coordination and cooperation, managerial competencies in leading people, and organisational competencies in the ability of the entire institution to learn and create value (Katz and Kahn, 1966, pp. 73-80; Rzepała, 2017, pp. 416-421).

Table 1. *Basic criteria for classifying competences*

Criteria	Categories	Practical significance
Types of competence	Hard and soft	It simplifies the creation of job profiles, but requires integration into hybrid tasks.
Level of efficiency	Threshold and differential	It distinguishes between minimum requirements and sources of above-average efficiency.
Function and scope	Cognitive, functional, social and meta-skills	It combines knowledge, action, relationships and the ability to learn.
Organisational level	Individual, team, managerial, organisational	It enables the alignment of staff development with the organisation's strategic objectives.

Source: Own compilation based on: Boyatzis, 1982, s. 20-27; Spencer, Spencer, 1993, s. 9-18; Delamare Le Deist, Winterton, 2005, s. 37-42; Rzepała, 2017, s. 416-421.

4. Managerial and Organisational Models

The models developed by Boyatzis (1982) and Spencer and Spencer (1993) show that managerial competencies are not limited to planning, organising and controlling. They also encompass achievement orientation, social influence, people development, leadership, collaboration, self-control, flexibility and analytical thinking.

Their value lies in linking competencies to observable behaviours, which makes them useful in Assessment Centres, behavioural interviews and 360-degree feedback (Boyatzis, 1982, pp. 30-42; Spencer and Spencer, 1993, pp. 20-31; Flanagan, 1954, pp. 327-335).

In Polish practice, the Universal Competency Model and the work of Filipowicz (2019) occupy an important place. This model groups competencies into social, personal, managerial and professional areas. Its advantage lies in its operationalisation: competencies can be described through behavioural indicators,

levels of proficiency and diagnostic criteria (Filipowicz, 2019, pp. 57-71; Polish Agency for Enterprise Development, 2019, pp. 5-18).

Quinn and his co-authors' concept of competing values provides a model of managerial roles in which a manager must balance seemingly contradictory roles: mentor and director, innovator and coordinator, facilitator and producer, broker and monitor. In conditions of volatility, the ability to switch management styles depending on the situation takes on particular significance (Quinn *et al.*, 2007, pp. 21-44; Górka *et al.*, 2025, pp. 185-202).

The organisational perspective is reinforced by the concept of a company's core competencies. Hamel and Prahalad (1994) emphasise that sustainable advantage does not stem solely from individual resources, but from the ability to integrate knowledge, technology and learning across the entire organisation (Prahalad and Hamel, 1990, pp. 79-91; Hamel and Prahalad, 1994, pp. 217-235).

Gorka *et al.*'s (2025) co-authored research on managerial behaviour indicates that excessive adherence to a single style may limit effectiveness. The classification of competencies should therefore take into account not only the possession of a specific trait, but also the ability to apply it appropriately in the context of the task, the team and the environment (Górka *et al.*, 2025, pp. 185-202).

5. Competencies in the Public Sector, Education and Knowledge-Based Organisations

Drozdowski (2012), in his analysis of employment trends in public organisations, highlights the strategic importance of human resource management in institutions providing public services.

In such an environment, competencies are linked not only to efficiency, but also to accountability, transparency, the quality of service provided to citizens and the public interest (Drozdowski, 2012, pp. 201-223).

This perspective broadens classical competency models to include an institutional dimension. A manager's competencies in a public organisation cannot be analysed solely as personal traits. They are linked to the scope of responsibility, regulations, organisational culture, procedural constraints and the social significance of decisions (Drozdowski, 2014, pp. 201-214).

Kęsy (2008) brings to the discussion the perspective of aligning vocational education with employers' needs. The classification of competences should be useful not only in businesses, but also in schools, universities, labour market institutions and local government. If the education system teaches qualifications that are detached from professional tasks, a competence gap arises (Kęsy, 2008, pp. 121-148).

With regard to healthcare organisations, Kęsy points out that the managerial competencies of medical staff should be understood as a combination of specialist knowledge, organisational responsibility, communication, and the ability to make decisions under pressure.

This approach aligns well with the need to treat competencies as a multidimensional construct (Kęsy, 2018, pp. 55-81). Chomać-Pierzecka (2018), in her analysis of corporate capital and innovation, reinforces the interpretation of competencies as a component of intellectual capital. Competencies become a mechanism for transforming knowledge, experience and creativity into innovation. From the perspective of the organisation of the future, this implies the need to combine a taxonomy of competencies with an assessment of innovative capacity (Chomać-Pierzecka, 2018, pp. 195-208).

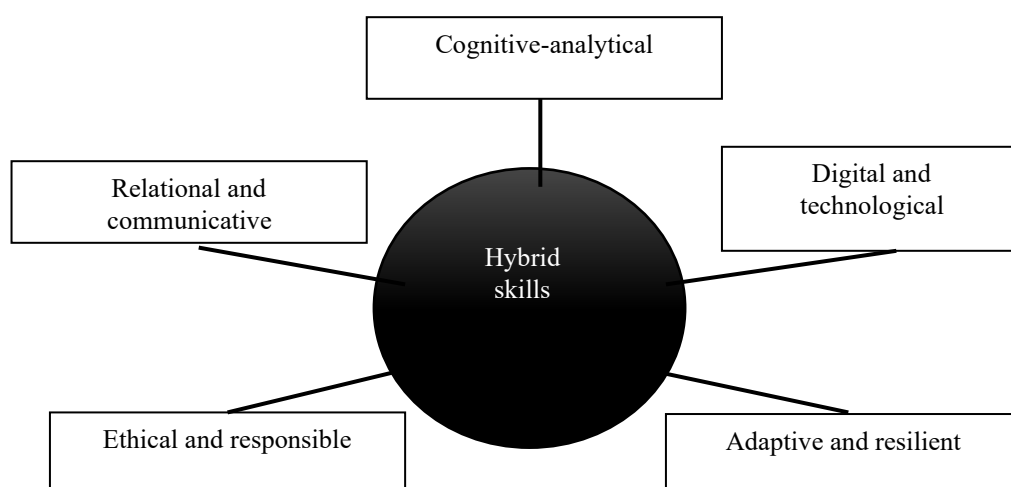
Borucka and Ostaszewski (2012), in developing the concept of resilience, provide a useful framework for describing adaptive competencies. Organisations of the future need employees and managers capable of adapting positively in conditions of overload, conflict, uncertainty and change. Resilience can therefore be treated as a meta-competence that strengthens the sustainability of other competences (Borucka and Ostaszewski, 2012, pp. 11-36).

6. An Original Matrix of Hybrid Competencies

Drawing on both classical and contemporary approaches, a matrix of hybrid competencies can be proposed. Its premise is to move away from a simple dichotomy between hard and soft skills. In digital, design and cross-organisational environments, most tasks require the simultaneous use of expert knowledge, technology, communication, reflection and responsibility (Delamare Le Deist and Winterton, 2005, pp. 39-42; Winterton, 2009, pp. 688-694; World Economic Forum, 2023, pp. 39-44).

The first dimension of the matrix is cognitive and analytical in nature. It encompasses critical thinking, data analysis, problem diagnosis, an understanding of processes, and the ability to interpret incomplete information. This dimension is essential for both specialists and managers, as organisational decisions are increasingly made on the basis of data (Tippins and Sohi, 2003, pp. 745-761; World Economic Forum, 2023, pp. 39-44).

The second dimension is digital and technological. It encompasses an understanding of digital tools, collaboration with AI systems, cyber hygiene, data quality assessment and an awareness of the limitations of algorithms. It does not merely refer to technical proficiency in using software, but to the ability to use technology responsibly in the work process (Tippins and Sohi, 2003, pp. 745-748; World Economic Forum, 2023, pp. 39-44).

Figure 2. The authors' hybrid competence matrix

Source: Own compilation based on: Delamare Le Deist, Winterton, 2005, s. 39-42; Winterton, 2009, s. 688-694; World Economic Forum, 2023, s. 39-44.

The third dimension concerns relational and communication skills. In a hybrid working environment, communication, feedback, negotiation, interdisciplinary collaboration and trust-building become prerequisites for effectiveness. Research on communication in management confirms that technology does not replace relationships, but requires new forms of consciously shaping them (Baran *et al.*, 2025, pp. 9-32; Piwowarczyk, 2020, pp. 33-58).

The fourth dimension is characterised by adaptability and resilience. It encompasses flexibility, learning, coping with stress, resistance to overload, and a readiness to change. The fifth dimension is ethical and responsibility-based, and encompasses transparency, responsible use of data, a focus on the common good, and the ability to anticipate the consequences of decisions for stakeholders (Borucka and Ostaszewski, 2012, pp. 11-36; Drozdowski, 2014, pp. 201-214).

Table 2. Dimensions of hybrid competencies

Dimension	Examples of competencies	Importance for future organisations
Cognitive-analytical	Critical thinking, data analysis, problem diagnosis.	It enables you to make informed decisions and interpret complex information.
Digital and technological	Working with AI, understanding algorithms, cyber hygiene.	It is key to effectiveness in an environment of automation and hybrid working.
Relational and communicative	Feedback, negotiations, interdisciplinary work.	It builds trust, coordination and the teams' ability to learn.
Adaptive and resilient	Learning, mental resilience, flexibility.	It enables organisations to remain effective during crises and times of

Dimension	Examples of competencies	Importance for future organisations
		change.
Ethical and responsible	Transparency, ethical use of data, the common good.	It protects against social, reputational and legal risks.

Source: Own compilation based on: Tippins, Sohi, 2003, s. 745-761; Baran i in., 2025, s. 9-32; Borucka, Ostaszewski, 2012, s. 11-36; World Economic Forum, 2023, s. 39-44.

7. The Application of Taxonomy in Management Practice

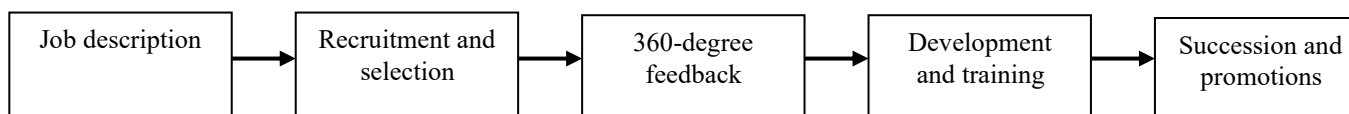
A competency taxonomy should not be treated as a static catalogue of terms. Its value only becomes apparent when it serves as a tool for designing a coherent human capital management system. The same competency model should integrate job description, recruitment, performance appraisal, development, promotion, succession planning and remuneration (Carroll and McCrackin, 1998, pp. 52-60; Filipowicz, 2019, pp. 57-71).

At the recruitment level, the taxonomy allows formal requirements to be distinguished from differentiating behaviours. At the employee appraisal level, it enables the development of behavioural indicators, which are more useful than general statements. At the development level, it indicates which competencies can be developed through training and which require mentoring, project experience or working with feedback (Flanagan, 1954, pp. 327-358; Spencer and Spencer, 1993, pp. 91-113).

In public administration and service organisations, accountability, communication and ethical skills are of particular importance. In technology companies, the role of digital, analytical and innovative skills is growing. In healthcare, education and public services, the combination of specialist knowledge, communication, empathy, resilience and accountability to stakeholders is key (Drozdowski, 2012, pp. 201-223; Kęsy, 2018, pp. 55-81; Chomać-Pierzecka, 2018, pp. 195-208).

The hybrid competence matrix can also be used in empirical research. Each dimension can be operationalised through behavioural indicators, questionnaire items, case studies, situational tasks or 360-degree feedback. As a result, the model can serve both a theoretical and a diagnostic function (Flanagan, 1954, pp. 327-358; Carroll and McCrackin, 1998, pp. 54-63).

Figure 3. The use of a competency taxonomy in an HR system



Source: Own compilation based on: Carroll, McCrackin, 1998, s. 52-60; Filipowicz, 2019, s. 57-71.

8. Methodological Implications for Further Research

Further research into competencies should avoid two oversimplifications. The first is excessive psychologisation, i.e. treating competencies as solely individual traits. The second is excessive functionalism, i.e. reducing competencies to a list of job tasks. Competencies are a relationship between the individual, the task, technology, the team and the organisational context (Delamare Le Deist and Winterton, 2005, pp. 39-42; Winterton, 2009, pp. 687-694).

In quantitative research, it is essential to develop scales that measure not only self-assessment but also observable behaviour. In qualitative research, behavioural interviews, critical incident analysis, observation of project work, and case studies of organisations implementing competency systems remain valuable (Flanagan, 1954, pp. 327-358; Carroll and McCrackin, 1998, pp. 54-63).

An important area of research remains the examination of the competence gap between education and the labour market. The approach presented by M. Kęsy confirms that the gap can be linked to a hybrid competency matrix to assess whether educational programmes develop only formal qualifications and/or the ability to operate in a real professional environment (Kęsy, 2008, pp. 121-148).

A separate area of research concerns competencies in working with AI. It is necessary to analyse not only knowledge of tools, but also the ability to assess data quality, explain decisions, manage the risks of automation, and maintain managerial accountability. In this sense, digital competencies must be combined with ethical and communication competencies (Tippins and Sohi, 2003, pp. 745-761; World Economic Forum, 2023, pp. 39-44).

9. Conclusions

The authors point out that classical taxonomies of competences remain useful because they organise the relationships between knowledge, action, behaviour and outcomes. However, they should not be treated as closed categories. Their value lies in the fact that they can serve as a basis for designing new models suited to the conditions of digitalisation.

In the authors' view, organisations of the future require hybrid taxonomies. A simple division into hard and soft skills is insufficient; it fails to capture the complexity of modern tasks. In practice, effectiveness depends on a combination of cognitive, technological, relational, adaptive and ethical skills.

In the authors' view, competency taxonomies should serve not only to describe but also to act. Their role is to support recruitment, assessment, development, succession planning, training design and change management. A well-designed taxonomy creates a common language between the employee, the manager, the HR department

and the organisation's strategy. Hence, further research should integrate the perspectives of the individual, the team and the organisation. Competencies are not the sole property of an individual employee. They can be strengthened or weakened by organisational culture, leadership style, the quality of communication, the incentive system and the way technology is utilised.

An additional benefit of the matrix is that it can be used to design education and training programmes. A programme should not be structured as a collection of unrelated topics, but rather as a sequence of experiences that develop all five dimensions. Participants should analyse data, use digital tools, communicate results, operate under pressure to change, and recognise the ethical consequences of decisions. Only then will the development of competencies be in line with the requirements of the organisation of the future.

Operationalisation understood in this way allows the matrix to be used in comparative studies across sectors. It is possible to compare the competency profiles of managers in public administration, private enterprises, universities, healthcare organisations and security institutions.

In each of these environments, the same competency dimension will take on a slightly different empirical content, but the underlying logic will remain the same: a competency is the ability to achieve results within a specific organisational context.

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