

**FROM QUALIFICATIONS TO ADAPTIVE COMPETENCES.
THE EVOLUTION OF THE CONCEPT OF COMPETENCE IN
MANAGEMENT STUDIES**

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Abstract: *This paper presents a concise yet in-depth analysis of the evolution of the concept of competence in management studies, illustrating the shift from the traditional understanding of qualifications as formally certified knowledge and credentials to the contemporary view of competence as a dynamic ability to perform effectively in a changing organisational environment. The starting point for the discussion is the distinction between qualifications, which primarily address the question of an individual's formal preparation for a specific professional role, and competencies, which only become apparent in practice through the way knowledge, skills, attitudes, motivation and responsibility are utilised in specific professional situations.*

The article draws on classical and contemporary concepts of competence, including the approaches of D.C. McClelland, J.C. Flanagan, R.E. Boyatzis, L.M. and S.M. Spencer, T. Teodorescu, C. Rowe, G. Filipowicz, and F. Delamare Le Deist

and J. Winterton. Particular attention is paid to models explaining the multi-layered structure of competence, such as the iceberg model, the competence triangle, and the distinction between 'competence' and 'competency'. The analysis shows that an employee's effectiveness does not stem solely from possessing declarative knowledge or certificates, but from the ability to apply them in conditions of uncertainty, time pressure, cross-departmental collaboration and technological change.

A key aspect of the study is the identification of the growing importance of adaptive skills, understood as the ability to learn, respond flexibly to change, work with technology, demonstrate mental resilience, communicate effectively, make responsible decisions and utilise feedback. In this context, the importance of digitalisation, artificial intelligence, resilience, intellectual capital and organisational communication is discussed. The article emphasises that the development of artificial intelligence does not eliminate the need for human competencies; on the contrary, it increases the importance of critical thinking, data interpretation, ethical responsibility and the combination of human judgement with algorithmic analysis.

The paper also proposes a synthetic approach to competence as a configuration of knowledge, skills, attitudes, motivation, values, responsibility and learning ability, which enables an individual to achieve expected results and adapt to a changing organisational context. The conclusions indicate that modern human resource management systems should go beyond the assessment of documents, diplomas and certificates, taking into account the observation of behaviour, the analysis of work outcomes, the diagnosis of development potential and the employee's ability to learn on the job. Adaptive competencies are thus presented as one of the key conditions for individual effectiveness, corporate innovation and the resilience of the organisation of the future.

Keywords: competence management, competences, qualifications, adaptive competences, resilience, artificial intelligence, human resource management.

Introduction. Competencies are a key category in modern management science, as they enable us to describe not only an employee's formal potential, but above all their ability to achieve results within a specific organisational environment. From a managerial perspective, competencies are a bridging category that links human capital theory, human resource management, managerial economics, organisational psychology and the practice of job design [4; 6, pp. 27–46; 7].

In the classical organisational model, qualifications served as a criterion for admission to perform tasks. A diploma, certificate, vocational examination or internship confirmed that the individual met the formal requirements. However, modern organisations are increasingly asking not only what an employee formally possesses, but also how they perform, whether they can apply knowledge in ambiguous situations, how they collaborate with others, and whether they are capable of learning in the face of technological change [25; 29].

This shift is particularly evident in the context of automation and digitalisation. Some technical tasks may be supported by algorithms, expert systems or artificial intelligence solutions, whilst the importance of skills that are harder to replace is growing: critical thinking, data interpretation, responsibility, communication, mental resilience, learning ability and an ethical understanding of the consequences of decisions [13; 18; 28].

The aim of this text is therefore not only to revisit classical definitions, but also to demonstrate their relevance today. McClelland's critique of intelligence tests, the Spencers' iceberg model, the distinction between competence and competency in Rowe and Teodorescu, and Winterton's holistic approach remain useful if interpreted as tools for describing the ability to operate in a changing environment [17, pp. 1–14; 21; 20, pp. 12–17; 22, pp. 27–29; 7, pp. 27–46].

The research objective of this study is to provide a synthetic reconstruction of the evolution of the concept of competence: from a formal, qualification-based approach to an adaptive, behavioural and contextual one.

The research problem can be formulated as follows: How should the classic distinction between qualifications and competences be interpreted in the context of

digital transformation, hybrid work and the growing role of artificial intelligence? The answer requires a combination of definitional, behavioural and applied perspectives. This paper is of a theoretical and review nature, and the method employed is a critical analysis of the literature and a reconstruction of selected competence models [7, pp. 27–46; 10].

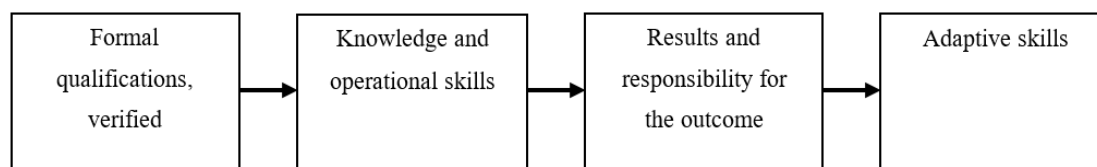


Figure 1. The direction of evolution: from formal qualifications to adaptive competences

Source: own compilation based on: McClelland (1973, pp. 1–14), Kęsy (2008, p. 15), World Economic Forum (2023).

The origins and ambiguity of the concept of competence

Etymologically, the term ‘competence’ derives from the Latin ‘competentia’, meaning suitability, authority, or the ability to speak and act within a specific scope. In the legal and administrative tradition, this concept was primarily associated with the scope of authority. It was only in the social sciences and management that it was transformed into a category describing an individual’s characteristics and their effectiveness in action [26; 10].

J. C. Flanagan’s critical incident technique is regarded as an important stage in the evolution of this concept. Its significance lay in drawing attention to real-life situations and specific behaviours leading to success or failure. Competence began to be understood as a phenomenon observable through the consequences of action, rather than merely as a statement on a qualification form [11, pp. 327–358].

Another breakthrough is linked to an article by D. C. McClelland, who advocated the study of competence rather than intelligence understood in abstract terms. In his view, professional success is not determined solely by test results, formal education or self-reported traits, but by consistent patterns of behaviour,

motivations and the ability to achieve results in real-world work settings [17, pp. 1–14].

However, the presence of several interpretative traditions remains a source of ambiguity. The American approach emphasises the characteristics of the individual and their behaviour, the British approach focuses on standards of work performance, whilst the continental approach seeks to combine knowledge, experience, autonomy, responsibility and professional context. These differences are not merely academic, as they influence the way job profiles, competency assessments and development programmes are constructed [7, pp. 27–46].

In Polish literature, the problem is complicated by the translation of the terms ‘competence’ and ‘competency’. The first term often refers to the ability to perform a specific task in accordance with a standard, whilst the second refers to an individual’s traits, behaviours and dispositions. A mechanical translation of both terms as ‘kompetencje’ leads to the loss of an important distinction between job requirements and the individual’s approach to achieving results [27, pp. 29; 20, pp. 12–17; 22, pp. 27–29].

The practical difference between the concepts of qualifications and competences

Qualifications can be defined as a formally recognised body of knowledge, education or authorisation. They are usually documented by diplomas, certificates, or other forms of institutional recognition. In this sense, qualifications answer the question of whether a person meets the formal criteria for entry into a profession or organisational role [25; 29].

Competences are broader in nature. They denote the ability to effectively apply knowledge, skills and attitudes in a specific context. They are therefore not merely a set of resources possessed by an individual, but a way of putting them into practice. A competent employee not only ‘knows’ (British school), but is able to act, interpret a situation, communicate, learn, correct mistakes and take responsibility for the outcome (American school) [4; 7, pp. 27–46; 10].

This distinction has significant implications for human resource management practice. If an organisation equates qualifications with competencies, it may hire someone who is formally qualified but unable to act independently, collaborate or adapt. It may also design training programmes focused on knowledge transfer rather than behavioural change. Therefore, modern HR systems should take into account both entry qualifications and performance competencies [8; 10].

T. Teodorescu and C. Rowe demonstrate that these concepts describe different dimensions of effectiveness. Competence relates to what is to be done and to what standard, whereas competency concerns how a person achieves the expected standard. For this reason, the assessment of competence should encompass tasks, outcomes, behaviours and the individual's deeper dispositions [20, pp. 12–17; 22, pp. 27–29].

Table 1. Comparison of qualifications and competencies from a management perspective

Evaluation criteria	Qualifications	Competences
Basis for the diagnosis	Diploma, certificate, qualification, work experience, formal training programme.	Observable behaviour, work outcomes, and how knowledge and skills are applied.
Character	Relatively static and institutionally established.	Dynamic, context-sensitive, and evolving as it is used.
Diagnostic question	Does the person meet the formal requirements?	Does the person perform effectively in a given professional situation?
Significance for the organisation	Entry requirements for the profession.	The foundation of efficiency, innovation, learning and competitive advantage.

Source: own compilation based on: Rowe (1995, pp. 12–17), Teodorescu (2006, pp. 27–29), Delamare Le Deist i Winterton (2005, pp. 27–46).

Structural models of competence

The best-known models of competence organise their components and demonstrate why knowledge alone is not sufficient to explain performance. The

competence triangle model highlights the coexistence of knowledge, skills and attitudes. Knowledge enables one to understand a task, skills enable its execution, and attitudes and motivations determine whether an individual is prepared to act responsibly and consistently (Weinert, 2001; Filipowicz, 2019).

The Spencer glacier model further develops this perspective by distinguishing between visible and hidden elements. Knowledge and technical skills are relatively easy to identify and develop. Personality traits, motives, values, self-image and social role are less visible, more difficult to change quickly, but often determine above-average effectiveness (Spencer and Spencer, 1993).

In practice, this means that different diagnostic methods must be combined. A knowledge test may confirm substantive preparedness, but it will not reveal resilience under pressure, willingness to cooperate or how one reacts to conflict. Assessment centres, behavioural interviews, critical incident analysis, 360-degree feedback and observation of project work allow us to access deeper layers of competence (Flanagan, 1954, pp. 327–358; Dubois and Rothwell, 2008; Filipowicz, 2019).

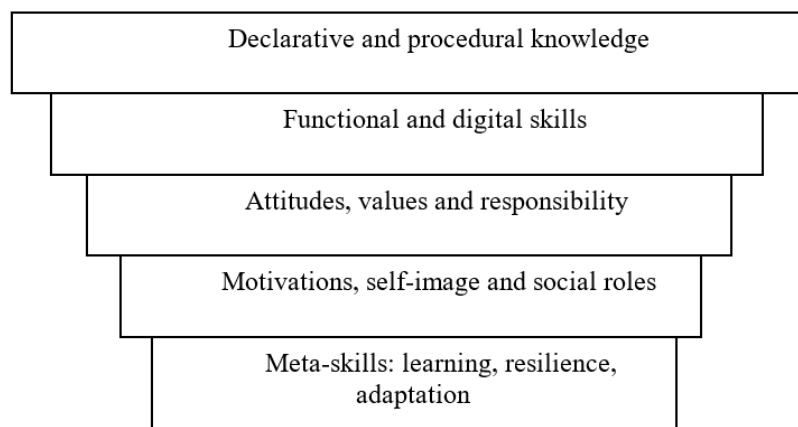


Figure 2. A layered model of competence: from knowledge to meta-competence

Source: own compilation based on D.C. McClelland (1973, pp. 1–14), L.M. i S.M. Spencerów (1993) and J. Wintertona (Delamare Le Deist i Winterton, 2005, pp. 27–46).

D. D. Dubois and W. J. Rothwell define competencies as personal traits consistently utilised to achieve expected outcomes. This definition combines personal and organisational components. Competence does not exist solely ‘within the

individual', but manifests itself in relation to a task, a standard, a context and the expected outcome (Dubois and Rothwell, 2008).

Adaptive skills in the digital age

The modern labour market is highlighting the importance of adaptive skills. It is no longer simply a matter of matching an individual to a clearly defined role, but rather about the ability to learn, reconfigure resources, interact with technology and respond responsibly to change. Reports on the future of work indicate that the rapid obsolescence of knowledge requires employees to develop meta-competences: learning, critical thinking, problem-solving and cognitive flexibility (Harzman, 2022; World Economic Forum, 2023).

Researcher M. Kęsy's perspective allows us to link the debate on competences with the issue of aligning education with employers' needs. Young people's professional competences cannot be understood solely as the result of the curriculum. They emerge at the intersection of schools, universities, businesses, labour market institutions and the actual tasks performed within organisations. The gap between formal qualifications and practical competences is particularly evident among graduates entering the labour market (Kęsy, 2008, p. 15).

The concept of resilience, developed in Polish literature by A. Borucka and others, can be creatively applied to the field of management. It refers to the ability to adapt positively despite difficulties, stress or risk. In an organisation, resilience manifests itself in maintaining operational efficiency during a crisis, making constructive use of social support, the ability to learn from failures, and maintaining responsibility despite pressure (Borucka and Ostaszewski, 2012, pp. 11–36; Borucka and Pisarska, 2012).

E. Chomać-Pierzecka, in her analysis of a company's capital and innovation, reinforces the argument that competencies are a component of intellectual capital. An organisation competes not only with its material resources, but also with people's ability to transform knowledge into new solutions. Adaptive competences are therefore not only a characteristic of an employee, but also a prerequisite for a company's innovation (Chomać-Pierzecka, 2018, pp. 195–208).

Co-authored research by M. Ćwiakała on communication, managerial behaviour and artificial intelligence, in turn, indicates that digital tools do not eliminate the need for human competencies. On the contrary, they increase the importance of skills in interpretation, communication, trust-building, accountability for data-driven decisions, and combining human judgement with algorithmic analysis (Baran, Górka, Ćwiakała et al., 2025; Górka, Baran, Wojak, Ćwiakała et al., 2025).

Assessment and skills development: from words to action

Competence development should not be equated solely with participation in training. Training can increase knowledge, but it does not always change behaviour. Therefore, an effective development process requires a cycle comprising: gap diagnosis, learning design, applying knowledge in practice, feedback, and readjustment of the competence model (Dubois and Rothwell, 2008; Filipowicz, 2019; Universal Competency Model, 2011).

The critical incident method plays a significant role here. It allows for the analysis of situations in which an employee's actions led to particularly positive or negative outcomes. On this basis, it is possible to identify differentiating behaviours, i.e. those that distinguish average employees from above-average ones (Flanagan, 1954, pp. 327–358).

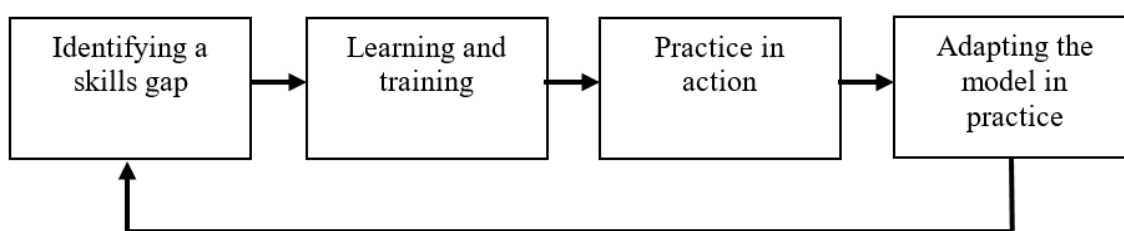


Figure 3. A cyclical model of competence development

Source: own compilation based on: Dubois i Rothwell (2008), Filipowicz (2019) and Uniwersalny Model Kompetencyjny (2011).

In organisational practice, diagnostic tools should be varied. A self-assessment questionnaire provides insight into an employee's self-perception, but needs to be supplemented by feedback from their line manager, colleagues and internal clients. Simulation exercises allow one to observe how an individual performs under

pressure, whilst a development interview enables the assessment to be linked to a learning plan (Dubois and Rothwell, 2008; Filipowicz, 2019).

The integration of artificial intelligence into HR processes can streamline data analysis, but does not relieve the organisation of its responsibility for interpreting the results. An algorithm can identify patterns, but a manager must assess their context, the risk of bias and the implications for the employee's development. Digital competencies are therefore becoming part of managerial competencies (Tippins and Sohi, 2003, pp. 745–761; Mithas et al., 2024; Górka, Baran, Wojak, Ćwiąkała et al., 2025).

Table 2. Tools for assessing and developing competences

Stage	Tools	The result for the organisation
Diagnosis	Behavioural interview, 360-degree assessment, critical incident analysis.	Identifying actual skills gaps and differentiating skills.
Uczenie się	Training, mentoring, coaching, project work.	Transforming knowledge into skills and behaviour.
Zastosowanie	Implementation tasks, cross-departmental projects, data analysis.	Competency testing in organisational practice.
Feedback	Performance review, measuring results, analysing indicators.	Review of behaviour and development plan.
Adaptacja	Updating competency profiles and development pathways.	Adapting the HR system to technological and market changes.

Source: own compilation based on: Flanagan (1954, pp. 327–358), Dubois i Rothwell (2008), Filipowicz (2019).

A proposal for a synthetic definition and research model. Based on the analysis conducted, the following definition can be proposed: competencies are a dynamic configuration of knowledge, skills, attitudes, motivation, values, responsibility and learning ability, which enables an individual to perform effectively in a specific professional role, achieve expected results and adapt to changes in the organisational context (Boyatzis, 1982; Delamare Le Deist and Winterton, 2005, pp. 27–46; Filipowicz, 2019).

This definition integrates behavioural and functional approaches. On the one hand, it emphasises how a person acts; on the other, it highlights the link between

competencies and the requirements of the role and the standard of outcomes. It also allows for the inclusion of meta-competencies in the analysis, i.e. the abilities that underpin the development of other competencies: learning, reflectiveness, flexibility and resilience (Delamare Le Deist and Winterton, 2005, pp. 27–46; Borucka and Pisarska, 2012; World Economic Forum, 2023).

In further empirical research, a model can be adopted in which formal qualifications are the independent variable, behavioural and adaptive competences act as mediating variables, and professional effectiveness, innovation and the ability to work in a changing environment are the dependent variables. This avoids the oversimplification that the level of education alone automatically translates into performance (Kęsy, 2008; Dubois and Rothwell, 2008).

A particularly promising area of research is the study of the relationship between digital and social competences. In many professions, effectiveness no longer stems from possessing a single set of skills, but from the combination of these skills. Employees must understand technology, but also communicate its outcomes, explain its limitations, collaborate with others and act ethically (Tippins and Sohi, 2003, pp. 745–761; Piwowarczyk, 2020; Harzman, 2022).

Table 3. Proposed research model of adaptive competences

Model component	Example indicators	Research significance
Formal qualifications	Level of education, qualifications, experience, licences.	They describe the requirements for entering the profession.
Behavioural competences	Communication, cooperation, responsibility, initiative.	They explain how results are achieved.
Adaptive skills	Learning, flexibility, resilience, working with AI.	They describe the ability to operate in a changing environment.
Professional efficiency	Quality of work, timeliness, innovation, stakeholder feedback.	It is the result of applying one's skills.

Source: own compilation based on: Boyatzis (1982), Delamare Le Deist i Winterton (2005, pp. 27–46), World Economic Forum (2023).

Conclusions. The literature review conducted by the researchers confirms that qualifications and competencies are not synonymous. Qualifications describe an individual's formal status, whereas competencies are demonstrated through action. For organisations, this means the need to build HR systems that combine formal requirements with the observation of behaviour and the assessment of results (Rowe, 1995, pp. 12–17; Teodorescu, 2006, pp. 27–29; Filipowicz, 2019).

The authors state that classical competency models remain relevant, but require refinement in the context of digitalisation. The competency triangle model, the iceberg model, and the distinction between competence and competency can serve as a foundation for designing modern competency profiles, provided they are supplemented with adaptive and ethical meta-competencies (Spencer and Spencer, 1993; Delamare Le Deist and Winterton, 2005, pp. 27–46; Harzman, 2022).

Organisations of the future should treat competencies as open configurations, geared towards a holistic approach, rather than as isolated traits within a closed system. An employee's effectiveness is determined by a combination of knowledge, skills, attitudes, motivation, resilience, responsibility and learning ability. In this sense, competencies are simultaneously an individual, relational and strategic resource (Boyatzis, 1982; Chomać-Pierzecka, 2018, pp. 195–208; Filipowicz, 2019).

Researchers point out that developing competencies requires long-term approaches. Training is just one of these elements. Experience, feedback, coaching, project work, reflection and learning from real organisational problems are of key importance. Competence development understood in this way becomes a prerequisite for an organisation's innovation, stability and resilience (Dubois and Rothwell, 2008; Filipowicz, 2019).

For managers, this means the need to create an environment conducive to learning. An employee will not develop resilience, independence and responsibility if the organisational culture punishes every mistake, blocks experimentation or restricts feedback. Adaptive competences therefore require not only individual effort but also the right organisational conditions: trust, clear goals, constructive feedback and space for reflection (Borucka and Pisarska, 2012; Filipowicz, 2019).

In employee development, it is particularly valuable to combine a competency-based approach with mentoring and on-the-job learning. Adaptive competences are shaped by experience, especially in situations where an individual must change their current way of working. Therefore, development tasks should gradually increase the level of autonomy, responsibility and complexity, rather than being limited to one-off training sessions (Dubois and Rothwell, 2008; Universal Competency Model, 2011).

In recruitment, this means moving away from simply checking application documents towards assessing behaviour and learning potential. A degree or certificate remains important, but should be treated as a prerequisite rather than sufficient proof of competence. The organisation should examine how a candidate solves problems, communicates limitations, uses data, responds to uncertainty, and whether they are able to learn from feedback (Rowe, 1995, pp. 12–17; Filipowicz, 2019).

The shift from qualifications to adaptive competences should be reflected in the way education is designed and in recruitment practices. Educational programmes that focus exclusively on imparting declarative knowledge may increase formal qualifications, but do not always develop the ability to act independently. Consequently, project-based methods, case studies, problem-based tasks, decision-making simulations and teamwork are becoming increasingly important (Kęsy, 2008; Council Recommendation, 2018; Vitello and Grotorex, 2022).

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