SILESIAN UNIVERSITY OF TECHNOLOGY PUBLISHING HOUSE

SCIENTIFIC PAPERS OF SILESIAN UNIVERSITY OF TECHNOLOGY 2026
ORGANIZATION AND MANAGEMENT SERIES NO. 242

KNOWLEDGE MANAGEMENT IN THE CONTEXT OF EVIDENCE-BASED MANAGEMENT AND INTEGRATED QUALIFICATIONS SYSTEM

Agnieszka KRAWCZYK-SOŁTYS[1*], Agnieszka WOJTAL[2]

[1] Opole University, Faculty of Economics; akrawczyk.soltys@uni.opole.pl, ORCID: 0000-0003-1575-3497
[2] Educational Research Institute – National Research Institute, Warszawa; a.wojtal@ibe.edu.pl
* Correspondence author

Purpose: The article is focused on presenting the main authors contributing to the development of knowledge management (KM) in organizations, evidence-based management (EBM) and Integrated Qualifications System (IQS) and exploring their different views. The aim of this article is a literature review to assess existing knowledge, identify gaps, and recognize areas requiring additional research. Based on the identified gaps and trends, the review provides a basis for formulating a theoretical framework for authors' own research - distinguish the interrelations between Knowledge Management (KM) in organizations, Evidence-Based Management (EBM) and Integrated Qualifications System (IQS) in Poland. The article aims to explore how these three components can be integrated to enhance decision making processes, support competency development, and improve organizational performance - presenting authors' conceptual model.
Design/methodology/approach: The article aims to explore how these three components can be integrated to enhance decision making processes, support competency development, and improve organizational performance. It also seeks to identify opportunities and challenges in implementing evidence-based practices and national qualification frameworks as tools for knowledge management in organizations.
Findings: The findings of this article highlight that knowledge alone is insufficient without mechanisms for its validation and application, just as qualifications without knowledge management risk becoming static and outdated. Evidence-based decision-making serves as the bridge between these two domains, ensuring that organizational strategies are grounded in empirical data, stakeholder insight, and real-world outcomes.
Originality/value: An identification the interrelations between Knowledge Management (KM) in organizations, Evidence-Based Management (EBM) and Integrated Qualifications System (IQS) in Poland and presenting authors' conceptual model.
Keywords: Knowledge Management, Evidence-Based Management, Integrated Qualifications System.
Category of the paper: Literature review.

1. Introduction

Nowadays, organizational success is increasingly determined by the ability to manage knowledge effectively. Knowledge Management (KM) in organizations refers to the systematic processes of acquiring, creating, storing, sharing, and applying knowledge to achieve strategic goals, foster innovation, and maintain competitive advantage. This capability is particularly important in the context of globalization, digital transformation, and the growing complexity of business environments. As markets evolve rapidly and workforce requirements shift, organizations must develop adaptive systems to ensure that the skills and competencies of their employees remain aligned with strategic priorities.

In contemporary practice, these processes are increasingly aligned with Evidence-Based Management (EBM) principles, which advocate for managerial decisions grounded in the best available evidence, including empirical research, organizational data, professional expertise, and stakeholder input. EBM promotes the use of the best available evidence from multiple sources — including scientific research, organizational data, stakeholder perspectives, and the professional expertise of managers — to support management practices. Within the human resources and learning development context, EBM ensures that talent management, training, and organizational change initiatives are not only based on tradition or intuition, but are supported by verifiable data and outcomes. By combining rigorous evidence with contextual judgement, EBM increases the likelihood of implementing policies and practices that deliver measurable results.

In Poland, the Integrated Qualifications System (IQS) offers an innovative approach to aligning individual skills with labor market needs, thereby serving as a valuable tool for evidence-based decision-making in organizations. The IQS is a comprehensive framework for the description, validation, and certification of qualifications, incorporating both formal education and non-formal learning achievements. It is closely linked to the Polish Qualifications Framework (PQF), which, in turn, is aligned with the European Qualifications Framework (EQF). This equalization ensures transparency, comparability, and portability of qualifications across different sectors and European countries.

The IQS enables employers, industry associations, and other stakeholders to participate directly in the creation and maintenance of qualification standards. By defining qualifications in terms of learning outcomes — what an individual knows, understands, and is able to do — the system provides a clear and measurable basis for assessing competencies. For organizations, this facilitates more accurate recruitment, targeted professional development, and the strategic deployment of human resources. It also enables the recognition of skills gained outside traditional educational pathways, thus expanding the talent pool available to employers.

Integrating the IQS into organizational knowledge management strategies enhances the ability to identify current competency gaps, forecast future skills requirements, and design training programs that are directly relevant to business objectives. Furthermore, the system supports the implementation of evidence-based HR policies by offering a robust framework for measuring and verifying qualifications, which can be used to assess the return on investment in learning and development initiatives.

The synergy between KM, EBM, and the IQS offers significant potential for improving organizational adaptability and resilience. Knowledge management guarantees that critical information and expertise are effectively captured and disseminated within the organization; EBM ensures that decisions are informed by the best available evidence; and the IQS provides that employee skills are formally recognized and aligned with market demands. Together, these approaches create a comprehensive, data-driven framework for managing organizational capabilities in a rapidly changing environment.

The article is focused on presenting the main authors contributing to the development of knowledge management (KM) in organizations, evidence-based management (EBM) and Integrated Qualifications System (IQS) and exploring their different views. The aim of this article is a literature review to assess existing knowledge, identify gaps, and recognize areas requiring additional research. Based on the identified gaps and trends, the review provides a basis for formulating a theoretical framework for authors' own research - distinguish the interrelations between Knowledge Management (KM) in organizations, Evidence-Based Management (EBM) and Integrated Qualifications System (IQS) in Poland. The article aims to explore how these three components can be integrated to enhance decision making processes, support competency development, and improve organizational performance - presenting authors' conceptual model. It also seeks to identify opportunities and challenges in implementing evidence-based practices and national qualification frameworks as tools for knowledge management in organizations.

2. Knowledge Management in organizations– theoretical approach

One of the most important organizational resources is knowledge. Every organization possesses this resource, but it is not always able to fully utilize it to increase the efficiency of other resources.

In practice, every initiative or action aimed at modern solutions draws on the concept of effective knowledge management to some extent (Craciun, Dumitru, 2011). The pursuit of effective knowledge management as a key organizational resource leads to the creation and implementation of management methods that support the processes of acquiring, transferring, and utilizing knowledge within the organization. These methods are often well-known and

previously used, but their modern application requires modifications in terms of assumptions, procedures, and instrumentation. Therefore, it can be assumed that knowledge management is becoming a driver of change in organizational and management areas.

The fundamental components of various definitions of knowledge include (Huseman, Goldman, 1999):

- experience, which encompasses the historical perspective of knowledge, the cumulative intellectual resources gathered in the past,
- truth, which represents the true state of affairs,
- judgment, which is the ability to assess an unknown situation within the context of a chosen value system,
- intuition, which provides the ability to make decisions in the absence of complete information,
- a system of cultural and ethical values that influence behavior and explain established habits.

Knowledge also has specific attributes that determine its importance to the organization. It acquires appropriate meaning in relation to specific tasks (it is relativized), is collectivized through the creation of networks of relationships, becomes accessible to others, and is externalized.

Knowledge in contemporary organizations is increasingly less linked to knowledge acquired from the environment – valuable knowledge is received through participation in organizational processes. In this sense, organizational knowledge arises from the integration of information streams (including codified knowledge from the environment) with the reality in which the organization operates, as only such knowledge captures the essence and specificity of the value creation process. It is characterized by subjectivity and does not reflect objectively effective solutions, but rather appropriate to the context of value generation. Knowledge generated within the organization is particularly valuable, as it is highly specific, unique, tacit, and difficult to replicate – thus becoming a source of competitive advantage. External knowledge is more widespread – accessible to others – and abstract, as well as more expensive. Widely available external knowledge, combined with unique internal knowledge, can become a source of new solutions.

From the perspective of the level of organizational knowledge, the following categories can be distinguished:

- external knowledge, which determines the overall situation in the organization's environment and allows for the identification of opportunities and threats, influencing decisions regarding the future functioning of the organization,
- at the organizational level – what the organization as a whole knows and how it can utilize it; it is a key factor in development and achieving competitive advantage,

- at the individual level – the knowledge of individual individuals, strongly based on experience; this knowledge is a fundamental element of the organization's knowledge, although sharing it can be difficult.

For the purposes of identifying knowledge gaps and selecting the optimal knowledge management strategy, we can distinguish knowledge: knowledge possessed by the organization, knowledge not possessed by the organization's environment, and non-existent knowledge (knowledge that has not yet been created). An organization can develop existing knowledge, strive to create new knowledge, and, if gaps are identified, seek to obtain knowledge from market participants.

Knowledge itself produces nothing—it becomes productive only when applied to a specific task. Knowledge becomes more valuable when applied, and its resources, supported by practical experience, naturally grow. Knowledge not translated into concrete action becomes useless, but taking action without specific knowledge is dangerous.

Nowadays the importance of knowledge in creating an organization's competitive advantage is constantly increasing (Barua, 2021). This is the result of turbulent changes taking place in various spheres. I. Nonaka and H. Takeuchi argue that knowledge is the only resource that determines an organization's competitiveness and, therefore, its survival in the market (Nonaka, Takeuchi, 1995). Currently, in times of rapid growth in knowledge resources and deep specialization, it is not enough to utilize only one's own potential and knowledge base – knowledge from all available sources must be accumulated. Knowledge is a valuable resource due to its increasing growth rate (the value generated from utilized knowledge increases the more it is utilized), while the growth rate of tangible resources decreases. The development of the resource-based approach to management has changed the perception of strategic resources. Tangible resources have ceased to play a primary role in achieving sustainable competitive advantage – this role has been assumed by intangible resources, which are seen as a source of advantage and a source of increased organizational value.

It's worth emphasizing that organizations learn by practically utilizing accumulated knowledge resources and providing employees with opportunities to draw conclusions from their actions and their outcomes (Obeso et al., 2020). This phenomenon is called sense-making, which involves developing coherent interpretations of past events, which can then influence changes in actions, understanding relationships, and adapting to the demands of the situation. Employee knowledge is widely recognized as one of the most important resources of any organization, enabling it to achieve a competitive advantage in the market (Argote, Ingram, 2000).

Towards the dynamic changes occurring in the environment, once developed, skills and competencies cannot be static – they must be subject to continuous evolution. For knowledge to become a key factor in an organization's competitive advantage (Al-Hakim, Hassan, 2016; Aldehayyat et al., 2021; Yap, Toh, 2020; Zain, Latief, 2020), the following conditions must be considered:

- competitive advantage must be consciously and carefully built,
- organizations should focus their efforts on internal sources of competitive advantage, such as knowledge resources, skills, and core competencies, which enable effective competition in diverse environmental conditions, as well as enabling them to shape that environment in some way,
- core competencies become not only a source of competitive advantage but also a factor determining its sustainability,
- unique individuals and teams play a significant role in building competitive advantage and enable the activation of other sources of competitive advantage within the organization,
- the development of core competencies and skills must anticipate market trends and competitor strategies.

The concept of knowledge management, however, is ambiguous. Just as there is no universally accepted definition of knowledge, there is also no single definition of knowledge management. Knowledge management is interdisciplinary in nature, hence some treat it as an independent system, while others focus on its connections with the process of creating and implementing an organization's strategy (Wiig, 1997).

Knowledge management is a multidimensional, controversial, and widely debated concept – it means different things to different professional groups: for IT specialists, it's the accumulation and codification of knowledge; for finance professionals, the measurement of intellectual capital; for human resources specialists, the development of knowledge resources; and for artificial intelligence specialists, the representation of knowledge. For strategists, knowledge is a fundamental resource in the process of building competitive advantage. Representatives of various disciplines therefore argue about what knowledge management is, what its determinants and characteristics are, and what conditions an organization must meet to implement this concept. However, there are many common areas among the trends and inspirations mentioned and discussed.

When analyzing the presented definitions of knowledge management, it is important to emphasize certain common features:

- it is most often perceived as a process leading to the identification, accumulation, creation, and utilization of knowledge,
- it is focused on achieving organizational goals, particularly creating and maintaining a competitive advantage,
- it involves motivating employees to share knowledge and creating an appropriate environment, procedures, and systems for knowledge transfer within the organization,
- the usefulness of knowledge management is closely related to its application dimension.

Furthermore, the diverse approaches to knowledge management allow us to formulate the following conclusions (Krawczyk-Sołtys, 2013):

- most authors attempt to capture the essence of knowledge management by distinguishing processes that impact knowledge resources – thus, the process approach dominates,
- the systemic aspect of knowledge management processes is often emphasized,
- an important element of knowledge management is the usefulness of the concept in achieving organizational goals – the usefulness of the concept is closely related to its application dimension.

Knowledge management at the organizational level is primarily associated with the creation of a knowledge management strategy and an organizational culture focused on knowledge accumulation and sharing; at the group level – with activities related to the coordination of cooperation consisting in creating conditions for sharing existing knowledge and creating new knowledge through well-organized group cooperation; at the individual level it must take into account the processes of using accumulated knowledge, generating new knowledge during the implementation of a task and codifying knowledge at the end of its implementation (Vyas, Bhalla, Najneen, 2020).

To sum up - it can be concluded that knowledge management should be utilitarian in nature, supporting the resolution of knowledge management problems to meet customer expectations in an increasingly competitive market. It should focus on the practical aspects of knowledge utilization in all processes that increase the organization's competitiveness. It should be an integral part of the entire organization's management, particularly human resources management, encompassing all management levels, taking into account the role of time and adapting intellectual assets to market conditions in advance (Romero-Hidalgo et al., 2021).

Knowledge management, understood in this way, will enable the achievement of strategic goals by streamlining the organization's operations, more efficient use of resources, skills, abilities, experience, developed policies and procedures, and technological capabilities. A comprehensive approach to knowledge management, taking into account all its aspects, guarantees the organization's long-term, favorable competitive position in the market.

3. The basic principles of Evidence-Based Management

The basic idea of Evidence-Based Management is that sound quality decisions require both critical thinking and use of the best available evidence. Of course, all practitioners use evidence in their decisions. But few pay attention to the quality of the evidence and tend to base their decisions on only one source. The result is decisions that rely on unfounded beliefs, fads and

fashions, and the unsupported though popular ideas of management gurus. The bottom line is bad decisions, poor outcomes, and little understanding of why things go wrong.

Evidence-Based Management seeks to improve the way decisions are made. It is an approach to decision-making and day-to-day work practice that helps practitioners to critically evaluate the extent to which they can trust the evidence they have at hand. It also helps practitioners identify and evaluate additional evidence relevant to their decisions.

EMB is about making decisions through the conscientious, explicit, judicious use of the best available evidence from multiple sources by (Barends, Rousseau, Briner, 2014):

- asking: translating a practical issue or problem into an answerable question,
- acquiring: systematically searching for and retrieving the evidence,
- appraising: critically judging the trustworthiness and relevance of the evidence,
- aggregating: weighing and pulling together the evidence,
- applying: incorporating the evidence into the decision-making process,
- assessing: evaluating the outcome of the decision taken to increase the likelihood of a favorable outcome.

Usually evidence mean information: facts or data supporting (or contradicting) a claim, assumption. It may be based on numbers, or it may be qualitative or descriptive. Evidence may come from scientific research suggesting some relatively generalizable facts about the world, people, or organizational practices. Evidence may also come from local organizational or business indicators, such as company metrics or observations of practice conditions. Even professional experience can be an important source of evidence, such as when an entrepreneur learns from having launched a variety of businesses that one particular approach seems more likely to pay off.

Most management decisions are not based on the best available evidence. Instead, practitioners often prefer to base decisions solely on their judgment derived from personal experience. However, personal experience alone is not a reliable source of evidence because it is highly susceptible to systematic errors (Bazerman, 2009).

Another heavily used source of evidence seems to be what other organizations are doing. Through benchmarking and so-called best practices, practitioners sometimes copy the methods and procedures of other organizations without critically evaluating whether those practices are actually effective and, if they are, whether they are also likely to work in a different context. At the same time, there are many barriers to evidence-based practice. Few practitioners have been trained in the skills required to critically evaluate the trustworthiness and relevance of the information they use. In addition, important organizational information may be difficult to access, and what is available can be of poor quality. Finally, practitioners are often unaware of the current scientific evidence available on key issues in the field (Kahneman, 2011).

According to the principles of evidence-based practice, evidence from four sources should be taken into account (Barends, Rousseau, and Briner, 2014):

- evidence from the scientific literature - many practitioners learn about research findings in their education or professional courses, new research findings are produced regularly, and these findings can often change our understanding;
- evidence from the organization - it can be financial data, such as cash flow or cost, or business outcomes, such as return on investment or market share. Also it can come from customers or clients in the form of customer satisfaction, repeat business, or customer recommendations or from employees through information about retention rates or levels of job satisfaction;
- evidence from practitioners - this type of evidence is sometimes referred to as tacit knowledge. Professional experience differs from intuition and personal opinion because it reflects the specialized knowledge or expertise acquired by repeated experience and practice of technical activities. Thoughtful practitioners also use their experience to judge whether research findings apply in a particular situation or a proposed solution is likely to work in a particular context. If relevant and trustworthy, experiential evidence plays a key role in the decision-making process;
- evidence from stakeholders - internal stakeholders include employees, managers, and board members. Stakeholders outside the organization, such as suppliers, customers, shareholders, the government, and the public at large, may also be affected. Stakeholder values and concerns are a reflection of what stakeholders believe to be important, which in turn affects how they tend to react to a decision's possible consequences.

A fundamental principle of evidence-based practice is that the quality of our decisions is likely to improve the more use we make of trustworthy evidence, meaning the best available evidence.

But evidence is not answers, it does not speak for itself. Evidence comes with a large degree of uncertainty. Evidence-based practitioners therefore make decisions based not on conclusive, solid, up-to-date information but on probabilities, indications, and tentative conclusions.

4. The Integrated Qualifications System in Poland – conceptual framework and implementation

In the context of future skills, it is important to pay special attention to those involved in the key transversal competencies, including critical thinking and comprehensive problem-solving skills, team work, the ability to adapt to new conditions, leadership skills and those relating to attitudes of openness and tolerance in an age of multiculturalism (Krawczyk-Sołtys, Wojtal, 2024, 2025).

The concept of lifelong learning is based on the recognition that the primary place of adult learning is no longer solely school or other educational institution, but also, and perhaps primarily, the workplace. In a knowledge-based economy, the learning culture developed within organizations becomes a factor in progress and social development. Investing in knowledge and qualifications supports the development of industries based on intellectual capital, which in turn contributes to increased earnings and a higher standard of living for citizens in the long term. Creating conditions that support individual enterprises in building and developing human capital adequate to their needs and achieving a knowledge-based competitive advantage, and thus in achieving economic success, is the responsibility of the state, local authorities, the enterprise itself, and intellectual and academic communities.

Implementing activities related to the broadly understood development of citizens at all stages of their lives and in diverse contexts therefore requires the creation of a policy that encompasses all paths for developing competencies and achieving qualifications (formal, non-formal, and informal) and is focused on ensuring coherence between them.

This directly points to the importance of systemic solutions for external validation of the competencies of labor market participants. If companies are not as good at evaluating employee competencies at the selection stage as is commonly believed, a transparent, reliable, and principled assessment of candidates' competencies and qualifications, conducted by professionally trained individuals, could become a significant alternative. This solution could be a national qualifications system, particularly the Polish Qualifications Framework and the National Qualifications Register (Sienkiewicz et al., 2013).

In Poland, one of the solutions aimed at supporting the development of the lifelong learning concept is the Integrated Qualifications System. Its basic elements derive largely from the Recommendations of the European Parliament and the European Council on the establishment of a European Qualifications Framework for lifelong learning. Qualifications described in the language of learning outcomes are primarily intended to contribute to the modernization of education and training systems, provide clear information for employers and employees, increase employability, mobility, and social integration of employees and learners. They are also intended to enhance the coherence of informal, non-formal, and formal learning and support validation. They are crucial for individuals, providing them with the opportunity to demonstrate their actual competences" (Dybaś, Pieńkosz, 2019).

In 2016, the Integrated Qualifications System (IQS) Act came into force, defining the system as a set of principles, standards, new functions and roles, and procedures governing the activities of various entities (individuals and institutions) involved in awarding qualifications and ensuring their quality. The Act provides information on which qualifications have been included in the IQS by law and which may be included at the request of an interested entity (Pieńkosz, Maj, 2024).

Equitable and inclusive access to educational and development services is also crucial (OECD, 2007). Considering the user of the Integrated Qualifications System (IQS), i.e., the individual wishing to identify and validate their knowledge, competencies and obtain a certificate, the following issues are important.

The adopted regulations are intended to contribute increasing the credibility and ensuring the comparability of qualifications awarded both in Poland and abroad, as well as to better match employee knowledge competencies to the needs of the labor market (Trawińska-Konador, 2020).

The Polish Qualifications Framework (PQR), encompassing all types of qualifications awarded in Poland, is a tool that, thanks to a series of reforms implemented in the education system, can function at the national and international levels. The approach of creating qualifications based on learning outcomes, their transfer, validation, and quality assurance in accordance with European standards became part of the entire formal education system (general, vocational, and higher education) even before the development and adoption of the PQF (Cedefop, 2025).

Learning outcomes are the reference point for all mechanisms and tools comprising the Integrated Qualifications Framework. The learning outcomes approach combines key European tools developed over the past decade, in particular the European Qualifications Framework and, at the national level, the qualifications frameworks developed in individual Member States. Learning outcomes are increasingly influencing the definition and description of qualifications and curricula, as well as the processes of assessment, teaching, and training. This approach was first explicitly formulated in European strategic documents in 2003 and has since been systematically promoted in the EU's policy agenda for education, training, and employment.

The PQF, similarly to the EQF, distinguishes eight levels of qualifications. The PQF level descriptors refer to the full spectrum of learning outcomes required for qualifications, i.e., knowledge, skills, and social competences. The descriptors of subsequent PQF levels reflect increasingly higher requirements in these areas. The PQF, as part of the Integrated Qualifications System, provides a common frame of reference for qualifications awarded in Poland (Trawińska-Konador, 2020).

Employee involvement is one of the most important factors contributing to the better use of their skills and higher productivity in the workplace. Increasing employee participation in the decision-making process on the organization of work and management can contribute to the better use of skills in the workplace (Heryanto, Aulawi, Munthe, 2020).

The integration of IQS mechanisms into HR and recruitment practices has significantly improved the transparency of competency requirements. Surveys conducted among employers by the Polish Agency for Enterprise Development (PARP) in 2023 showed that 64% of large and medium-sized enterprises use IQS-aligned qualification standards when defining recruitment criteria or developing employee training plans. Furthermore, nearly 40% of employers indicated that the IQS framework facilitated cross-sector recruitment by providing

clear competency descriptors and levels compatible with the European Qualifications Framework (EQF) (PARP, 2024).

From a professional development perspective, the IQS has also become a key reference for the design of upskilling and reskilling programs. Between 2020 and 2024, over 120,000 training participants in public and private education institutions received qualifications aligned with the IQS. Data from the National Training Fund (NTF) indicate that the share of funded courses based on IQS-referenced qualifications increased from 22% in 2019 to 57% in 2023, illustrating a structural shift toward competence-based development (Ministerstwo Rodziny i Polityki Społecznej, 2024).

The Integrated Qualifications System also influences employee professional and spatial mobility. Linking the Integrated Qualifications System (IQS) levels to the European Qualifications Framework (EQF) promotes both vertical and horizontal professional mobility within the country and the European Union. According to Cedefop (Cedefop, 2023), Poland has recorded a 23% increase in intra-EU recognition of professional qualifications since 2018, largely due to the interoperability of IQS qualification levels. 68% of individuals obtaining market qualifications changed or advanced their professional role within a year after validation, while 27% transitioned to a different sector or region, confirming IQS' role in enhancing employability and flexibility. Moreover, employers and training institutions report that the IQS framework has improved the efficiency of HR planning. In a 2024 74% of respondents from HR departments indicated that the standardization of qualifications under IQS simplified competency mapping and succession planning. At the same time, over 60% of training providers acknowledged that IQS increased the perceived credibility and transferability of their educational offer, encouraging employees to pursue structured qualification pathways rather than isolated short courses (Instytut Badań Edukacyjnych – Państwowy Instytut Badawczy, 2024).

To sum up, the IQS has shifted from a primarily regulatory framework to a data-driven tool supporting workforce development and mobility. Its measurable impact can be seen in recruitment practices, employee training, and the growing interoperability of qualifications across the EU. Quantitative evidence confirms that IQS not only strengthens the connection between education and the labor market but also contributes to building a culture of lifelong learning and competence-based employment in Poland.

The position of a company operating in a knowledge-based economy increasingly depends on the quality of its intangible resources, i.e., human capital. Human capital plays a strategic role in the organization and is considered a potential source of competitive advantage. Modern organizations are therefore forced to seek tools that enable them to properly diagnose, assess, and develop employee competencies, as employee knowledge largely determines a company's success.

5. Conceptual model integrating Knowledge Management (KM), Evidence-Based Management (EBM), and the Integrated Qualifications System (IQS)

Knowledge enables people to make decisions, take action and solve problems, to allow the implementation of strategies and achievement of objectives (Mol et al., 2013). The focus of knowledge management on organizational performance is increasing. Open innovation is the key to improving knowledge management. Knowledge management is used to develop innovation and achieve sustainability. In this case, organizational performance plays a role in achieving the status of being a competitive company.

There is still a lack of adequate knowledge (tacit and explicit) on how to combine social, environmental and business aspects into the core processes of the organization and how to overcome existing barriers to encourage companies in the pursuit of their goals. As a consequence, interdisciplinary knowledge processes need to be investigated in the context of various fields in an integrative manner.

That's why the dynamics of Knowledge Management within the context of Evidence-Based Management and the Integrated Qualifications System is significant.

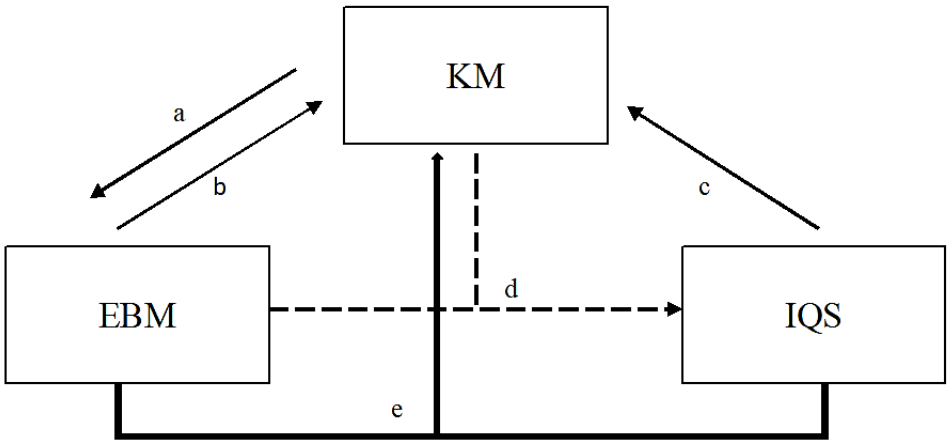
The literature was selected to ensure a comprehensive and multifaceted approach to the analyzed issue. Domestic and international publications were included to present diverse approaches. The criteria for selecting literature were its currency, credibility, and relevance to the topic. The most recent studies, reflecting the current state of research, were included, as well as classic works that provide the theoretical foundation for the area.

Particular attention was given to scientific publications, institutional reports, and expert studies of recognized substantive and methodological value. This literature review enabled to understand the theoretical foundations of the problem and relate them to current trends.

As a result of literature review it was founded that a specific model integrating Knowledge Management (KM), Evidence-Based Management (EBM), and the Integrated Qualifications System (IQS) isn't directly provided. Insomuch as authors created their own conceptual model **(Figure 1)** which is focused on using EBM to systematically capture, share, and apply organizational knowledge, ensuring this knowledge aligns with and develops the skills and competencies defined within the IQS to achieve strategic organizational goals. Key elements of this model include a supportive organizational culture, technological infrastructure for knowledge sharing, robust EBM processes to identify and use reliable data, and mechanisms to link this evidence to the development and certification of knowledge and skills outlined in the IQS:

- Knowledge Management (KM) is the overarching process of identifying, capturing, structuring, and disseminating knowledge within an organization to improve its performance and foster innovation.

- Evidence-Based Management (EBM) is a decision-making framework that advocates for the use of the best available scientific evidence to inform management practices and policies, ensuring that decisions are based on reliable data rather than assumptions or gut feelings.
- Integrated Qualifications System (IQS) is a framework for defining, recognizing, and certifying the skills and knowledge that individuals and organizations need to perform effectively in a given field or industry.
- Organizational Culture - a supportive and cooperative environment that motivates personnel to share their expertise and innovate, which is crucial for the successful implementation of both KM and EBM.
- Technology & Infrastructure - tools and systems that facilitate the storage, retrieval, and dissemination of explicit knowledge, ensuring accessibility and timely distribution.



a - resource for
b - ensures evaluation
c - sets benchmark for competencies and knowledge required
d - identify knowledge gaps and develop programs
e - leads to further improvements

Figure 1. Conceptual model integrating Knowledge Management (KM), Evidence-Based Management (EBM), and the Integrated Qualifications System (IQS).

Source: Own study.

Authors' in their model propose the following integrating connections **(Figure 1):**

- KM as a foundation - KM practices provide the structure for knowledge creation, storage, and sharing. This knowledge then becomes the resource for EBM.
- EBM guides knowledge application - EBM principles ensure that the knowledge captured through KM is evaluated for its validity and relevance, guiding its application in decision-making and strategic planning.
- IQS as the target for skill development - the IQS sets the benchmark for the competencies and knowledge required. KM and EBM work together to identify

knowledge gaps and develop programs (like training or learning initiatives) that build the skills defined in the IQS.

- Feedback loop for continuous improvement - the application of evidence-based knowledge within the context of the IQS creates a continuous feedback loop, where the performance of individuals and processes is evaluated, leading to further improvements in knowledge management and skills development.

In essence, an integrated conceptual model would use the systematic processes of KM, guided by the rigor of EBM, to develop and apply knowledge that demonstrably meets the specific skills and knowledge requirements set forth in the IQS, ultimately driving organizational effectiveness and innovation.

An identification the interrelations between Knowledge Management (KM) in organizations, Evidence-Based Management (EBM) and Integrated Qualifications System (IQS) presented in authors' conceptual model form the basis for research aimed at empirically confirming the model's assumptions and identifying factors determining its effectiveness in practice: qualitative research (in-depth interviews and case studies), creation of diagnostic tools, validation of the model through quantitative research and formulate practical recommendations for implementing the model in organizations in Poland.

6. Discussion

The literature review presented in this article and authors' conceptual model demonstrates that the integration of Knowledge Management (KM), Evidence-Based Management (EBM) and the Integrated Qualifications System (IQS) provides a robust, synergistic approach developing and sustaining organizational competitiveness in the modern economy.

First, it is evident that KM is essential for capturing, structuring, and applying knowledge assets across organizational processes. Second, EBM offers a disciplined, data-driven approach to managerial decision-making. Third, the IQS serves as a powerful enabler for aligning workforce competencies with labor market demands. By defining qualifications in terms of explicit learning outcomes, the IQS offers a transparent and standardized structure for recognizing skills acquired through both formal education and informal or non-formal learning. The alignment of the IQS with the Polish Qualifications Framework (PQF) and, by extension, the European Qualifications Framework (EQF) ensures the comparability and portability of qualifications. This not only benefits individuals seeking mobility within the European labor market but also assists employers in benchmarking skill levels and qualifications across borders.

The findings of literature review highlight that knowledge alone is insufficient without mechanisms for its validation and application, just as qualifications without knowledge management risk becoming static and outdated. Evidence-based decision-making serves as the bridge between these two domains, ensuring that organizational strategies are grounded in empirical data, stakeholder insight, and practical outcomes.

This article explores the intersection of these three domains, analyzing how the principles of KM and EBM can be operationalized through the application of the IQS in organizational contexts. Integrating these approaches can support strategic talent management, enhance innovation, and strengthen an organization's position in the knowledge-based economy.

The intersection of these three domains provides a model for building organizational resilience and adaptability:

- KM ensures knowledge is captured, retained, and shared effectively.
- EBM ensures decisions are informed by the best available evidence.
- IQS ensures that skills and qualifications are clearly defined, measurable, and aligned with organizational needs.

Together, they create an integrated framework that supports continuous learning, responsive talent management, and sustainable competitive advantage.

However, the successful implementation of this integrated approach requires not only organizational commitment but also systemic collaboration between employers, educational institutions, industry bodies, and policymakers. Without such cooperation, the potential of the IQS to meet evolving labor market needs and support evidence-based talent strategies will be underutilized.

Between 2018 and 2024, within the framework of EU-funded system projects co-financed by the European Social Fund (ESF), over 3,000 analyses of market qualifications were conducted, and approximately 280 new qualifications were entered into the IQS Register (IBE, 2024). The validation process is based on empirical evidence, and decisions on the inclusion of qualifications are made using quality criteria and data on labor market demand for specific competencies across economic sectors.

The practical application of Evidence-Based Management is also evident in the projects of the Polish Agency for Enterprise Development (PARP), which since 2016 has implemented programs based on sectoral data analysis. 34 sectoral competence maps were developed, identifying key qualifications in industries such as ICT, logistics, construction, automotive, and energy. Based on research results and consultations with industry organizations, more than 200 sectoral qualifications aligned with labor market needs have been created (PARP, 2024). Empirical data are used not only to design new qualifications but also to monitor the effectiveness of training and programs financed from public funds.

Elements of EBM are increasingly being adopted by enterprises and educational institutions that use the IQS. Training providers, vocational universities, and labor market institutions apply data-driven approaches to analyze qualifications, validation results, and graduate employability indicators.

In summary, Poland serves as a noteworthy example of a country that has consistently implemented the principles of EBM within its qualifications policy and competence management systems. The integration of EBM and IQS has contributed to greater transparency in educational and vocational training decision-making, more efficient investment in human capital, and stronger links between education, research, and the economy. This integrated, data-driven approach enables the creation of a lifelong learning system based on verified evidence, reliable qualifications, and the actual needs of the labor market.

Based on the findings above, the following recommendations can be proposed for organizations, policymakers, and HR practitioners seeking to leverage the synergies between KM, EBM, and the IQS:

- embed IQS principles into organizational HR strategy,
- strengthen collaboration between employers and qualification authorities,
- integrate EBM practices into learning and development,
- use Knowledge Management systems to capture and disseminate skills insights,
- leverage IQS for talent mobility and career pathing,
- promote the recognition of non-formal and informal learning,
- develop cross-sector skills forecasting mechanisms,
- foster a culture of continuous learning,
- monitor and evaluate integration outcomes,
- policy support for IQS uptake in organizations.

7. Conclusions

After literature review assessing existing knowledge, identifying gaps, and recognizing a basis for formulating a theoretical framework for authors' own research areas the interrelations between Knowledge Management (KM) in organizations, Evidence-Based Management (EBM) and Integrated Qualifications System (IQS) was distinguished.

The presented in article conceptual model represents an attempt to integrate three complementary approaches: Knowledge Management, Evidence-Based Management, and Integrated Qualifications System. The aim of this integration was to build a coherent framework that will allow for a better understanding of how knowledge—scientific, expert, and practical—can be effectively used in decision-making processes and in developing the

competencies of individuals and organizations. This model assumes that effective knowledge management cannot be limited to information collection but must encompass its critical verification, validation, and utilization based on empirical evidence, which is the essence of the evidence-based approach.

The model expands existing approaches to knowledge management, which have often focused on technological or process-based aspects (Nonaka, Takeuchi, 1995; Davenport, Prusak, 1998). The proposed approach shifts the emphasis to the use of knowledge in decision-making practice, invoking the principles of EBM—that is, decision-making based on the best available scientific evidence, organizational data, and professional experience. Thus, the model bridges the gap between knowledge management theory and practical management.

The inclusion of the Integrated Qualifications System (IQS) in the model aims to emphasize the importance of knowledge validation and certification as an element consistent with the EBM concept. As a tool for organizing and certifying qualifications acquired through various forms of learning, the IQS represents a practical dimension of knowledge management on a macro scale, combining individual knowledge with institutional and systemic knowledge. In this sense, the IQS can be considered an instrument for implementing EBM in public policies related to education, the labor market, and competency development.

Of course, this concept is not without its limitations. First, implementing the model requires organizational maturity in knowledge management and a culture of openness to data and scientific evidence. Second, the complexity of qualification systems and the diversity of knowledge sources can lead to difficulties in ensuring consistency across decision-making levels. Third, the lack of standardized tools for measuring "EBM maturity" can hinder objective assessment of implementation effectiveness. Despite these limitations, the model opens up broad prospects for further research.

In summary, the presented model is conceptual in nature, but its practical importance is significant. Therefore, it seems necessary to conduct empirical research in this area, which will enrich scientific knowledge, rationalize the research methodology, as well as allow to formulate more recommendations for practice.

References

1. Aldehayyat, J.S., Almohtasb, A.A., Alsoboa, S.S. (2021). An Evaluation Of Critical Success Factors For Knowledge Management In The Financial Sector: Evidence From Developing Country Context. *Academy of Strategic Management Journal*, *Vol. 20, Iss. 3*, pp. 1-20. Retrieved from: https://www.abacademies.org/articles/An-evaluation-of-critical-success-factors-for-knowledge-management-in-the-financial-sector-evidence-from-developing-country-context-1939-6104-20-3-756.pdf, 31.08.2025.

2. Al-Hakim, L.A., Hassan, S. (2016). Core requirements of knowledge management implementation, innovation and organizational performance. *Journal of Business Economics and Management*, *Vol. 17, No. 1*, pp. 109-124, https://doi.org/10.3846/16111699.2012.720597
3. Argote, L., Ingram, P. (2000). Knowledge transfer in organizations: A basic for competitive advantage in firms. *Organizational and Behavior Human Decision Processes, Vol. 82, Iss. 1*, pp. 150-169, https://doi.org/10.1006/obhd.2000.2893
4. Barends, E., Rousseau, D.M., Briner, D.E. (2014). *Evidence-Based Management. Basic Principless*. Amsterdam: Center for Evidence-Based Management.
5. Barua, B. (2021). Impact of total quality management factors on knowledge creation in the organizations of Bangladesh. *TQM Journal*, *Vol. 33, Iss. 6*, pp. 1516-1543, https://doi.org/10.1108/TQM-06-2020-0145
6. Bazerman, M.H. (2009). *Judgment in managerial decision making*. New York: Wiley.
7. Cedefop (2023). *Skills Forecast 2023-2030*. Luksemburg: Publications Office of the European Union. Retrieved from: https://www.cedefop.europa.eu/files/skills_forecast_2023_luxembourg.pdf 06.10.2025
8. Cedefop. European Centre for the Development of Vocational Training (2025). *Vocational education and training in Europe: Poland*. Thessaloniki (Pylea), Grece. Retrieved from: https://www.refernet.de/dokumente/pdf/2025_SP_PL.pdf, 30.08.2025.
9. Craciun, B.M., Dumitru, S.B. (2011). Knowledge Management – the Importance of Learning Theory. *Journal of Knowledge Management, Economics & Information Technology, Vol. 1, Iss. 7*, pp. 96-103. Retrieved from: https://www.researchgate.net/publication/254450879_Knowledge_Management_-_The_Importance_of_Learning_Theory, 10.08.2025.
10. Davenport, T.H., Prusak, L. (1998). *Working Knowledge: How Organizations Manage What They Know*. New York: Harvard Business School Press. https://doi.org/10.1145/348772.348775
11. Dybaś, M., Pieńkosz, J. (2019). *Aktorzy i kwalifikacje. Analiza wybranych aspektów wdrażania Zintegrowanego Systemu Edukacji*. Warszawa: Instytut Badań Edukacyjnych.
12. Heryanto, D., Aulawi, H., Munthe, A.R.S. (2020). Design of knowledge management system to improve employee capabilities in organizations. *International Journal of Scientific and Technology Research, Vol. 9, Iss. 4,* pp. 80-83. Retrieved from: https://www.ijstr.org/final-print/apr2020/Design-Of-Knowledge-Management-System-To-Improve-Employee-Capabilities-In-Organizations.pdf, 14.08.2025.
13. Huseman, R.C., Goldman, J.P. (1999). Leading with Knowledge. *The Nature of Competition in 21st Century*. London: Sage Publications.
14. Instytut Badań Edukacyjnych – Państwowy Instytut Badawczy (IBE-PIB) (2024). *Monitoring walidacji kwalifikacji w Polsce 2024*. Warszawa: IBE-PIB.

15. Instytut Badań Edukacyjnych (2024). *Raport o wdrażaniu Zintegrowanego Systemu Kwalifikacji w Polsce 2018-2024*. Warszawa: IBE.
16. Kahneman, D. (2011). *Thinking, fast and slow*. London: Penguin Group.
17. Krawczyk-Sołtys, A. (2013). *Zarządzanie wiedzą w szpitalach publicznych. Identyfikacja poziomu i kierunki doskonalenia. Studia i Monografie, nr 485*. Opole: Wydawnictwo Uniwersytetu Opolskiego.
18. Krawczyk-Sołtys, A., Wojtal, A. (2024). Sustainable development of Polish healthcare determined by the Covid-19 pandemic. *Zeszyty Naukowe Politechniki Śląskiej*, *No. 191*, pp. 305-319, http://dx.doi.org/10.29119/1641-3466.2024.191.20
19. Krawczyk-Sołtys, A., Wojtal, A. (2025). Skills in polish healthcare in the context of Integrated Skills Strategy 2030. *Zeszyty Naukowe Politechniki Śląskiej, No. 217*, pp. 221-237. Retrieved from: https://managementpapers.polsl.pl/wp-content/uploads/2025/04/217-KRAWCZYK-SO%C5%81TYS-WOJTAL.pdf, 10.08.2025.
20. Ministerstwo Rodziny i Polityki Społecznej (2024). *Krajowy Fundusz Szkoleniowy. Raport roczny 2023*. Warszawa: MRPiPS.
21. Mol, S.T., Kismihók, G., Ansari, F., Dornhöfer, M. (2013). Integrating Knowledge Management in the Context of Evidence Based Learning: Two Concept Models Aimed at Facilitating the Assessment and Acquisition of Job Knowledge In: M. Fathi (Ed.), *Integration of Practice-Oriented Knowledge Technology: Trends and Prospectives* (pp. 29-45). Berlin/Heidelberg: Springer-Verlag, DOI:10.1007/978-3-642-34471-8_3
22. Nonaka, I., Takeuchi, H. (1995). *The Knowledge Creating Company*. Oxford/New York: Oxford University Press. doi.org/10.1016/0024-6301(96)81509-3
23. Obeso, M., Hernández-Linares, R., López-Fernández, M.C., Serrano-Bedia, A.M. (2020). Knowledge management processes and organizational performance: the mediating role of organizational learning. *Journal of Knowledge Management, Vol. 24, Iss. 8,* pp. 1859-1880, https://doi.org/10.1108/JKM-10-2019-0553
24. OECD (2007). *No More Failures: Ten Steps to Equity in Education.* Paris: OECD.
25. Pieńkosz, J., Maj, M. (2024). *Kwalifikacje a potrzeby uczących się dorosłych. Perspektywa wnioskodawców w Zintegrowanym Systemie Kwalifikacji*. Warszawa: Instytut Badań Edukacyjnych.
26. Polska Agencja Rozwoju Przedsiębiorczości (PARP) (2024). *Kompetencje dla sektorów – raport końcowy 2016-2024*. Warszawa: PARP.
27. Romero-Hidalgo, J.A., Isiordia-Lachica, P.C., Valenzuela, A., Rodríguez-Carvajal, R.A. (2021). Knowledge and innovation management model in the organizational environment. *Information, Vol. 12, No. 6, art. 225*, https://doi.org/10.3390/info12060225
28. Sienkiewicz, Ł., Jawor-Janiewicz, A., Sajkiewicz, B., Trawińska-Konador, K., Podwójcic, K. (2013). *Zarządzanie zasobami ludzkimi w oparciu o kompetencje. Perspektywa uczenia się przez całe życie*. Warszawa: Instytut Badań Edukacyjnych.

29. Trawińska-Konador, K. (2020). Zintegrowany system kwalifikacji - narzędzie łączące edukację z rynkiem pracy. *Polityka społeczna, No. 10*, pp. 8-12, https://doi.org/10.5604/01.3001.0014.4748
30. Vyas, A., Bhalla, P., Najneen, A. (2020). Competitive analysis of interaction between organizational culture and knowledge management in indian higher education institutions: Public and private sector. *International Journal of Advanced Science and Technology*, *Vol. 29, No. 5,* pp. 5313-5322. Retrieved from: https://www.researchgate.net/publication/352350749_Competitive_Analysis_of_Interaction_between_Organizational_Culture_and_Knowledge_Management_in_Indian_Higher_Education_Institutions_Public_and_Private_Sector, 12.08.2025.
31. Wiig, K.M. (1997). Knowledge Management: an Introduction and Perspective. *The Journal of Knowledge Management, Vol. 1, Iss. 1*, pp. 6-14, https://doi.org/10.1108/13673279710800682
32. Yap, J.B.H., Toh, H.M. (2020). Investigating the principal factors impacting knowledge management implementation in construction organisations. *Journal of Engineering, Design and Technology, Vol. 18, Iss. 1*, pp. 55-69, https://doi.org/10.1108/JEDT-03-2019-0069
33. Zain, A.H., Latief, Y. (2020). Evaluation of the maturity level and critical success factors in the implementation of knowledge management in the national private construction service company in Indonesia. *IOP Conference Series: Materials Science and Engineering, Vol. 830, Iss. 2,* pp. 22-39, https://doi.org/10.1088/1757-899X/830/2/022039