

Strategic Management of Academic Competency Development in Knowledge-Based Universities: An Integrated Conceptual Framework

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Abstract

Academic competency development is increasingly important to the strategic management of knowledge-based universities. However, approaches that focus primarily on individual training activities may overlook the institutional conditions and collaborative processes required for sustained professional learning. This conceptual paper develops an integrated framework for the strategic management of academic competency development by synthesizing competency-based, dynamic capabilities and communities of practice perspectives. The framework distinguishes five domains of academic competencies from three complementary institutional development dimensions: an enabling university environment, competency-based training, and academic learning communities. It further connects institutional strategic priorities with competency development mechanisms, implementation processes, and continuous review. This paper proposes practical directions for competency mapping, organizational support, targeted professional development, collaborative learning, and institutional adaptation. Its principal contribution is an integrated explanation of academic competency development as a strategically coordinated institutional process rather than an isolated training function. As the framework has not been empirically validated, future research is needed to examine its applicability, assess the proposed constructs, and investigate their relationships across different higher education contexts.

Keywords: Academic competency development; Strategic management; Knowledge-based universities; Competency-based training; Academic learning communities; Conceptual framework.

Introduction

The transition toward a knowledge-based economy has fundamentally transformed the role of higher education institutions in generating, disseminating, and applying knowledge. Within this evolving context, knowledge, innovation, and human capabilities have become essential resources for institutional development and long-term competitiveness. Universities are consequently expected to move beyond their traditional educational functions and strengthen their contributions to knowledge creation, research, innovation, and societal development. Such transformations require institutional strategies that recognize academic staff as central intellectual resources and prioritize the continuous development of their professional competencies (International Commission on the Futures of Education, 2021; Organization for Economic Cooperation and Development [OECD], 1996).

As knowledge-intensive institutions, universities depend substantially on the capabilities of their academic staff to fulfill their educational, research, and societal missions. Academic competencies extend beyond disciplinary expertise to encompass teaching effectiveness, research capabilities, digital proficiency, leadership, collaboration, and the ability to respond to changing institutional and societal expectations. From this perspective, competency development should not be understood merely as an individual professional responsibility but as an institutional priority requiring systematic planning, organizational support, and continuous investment in human capital. Boyer (1990) emphasized the multidimensional nature of academic work through the interrelated functions of discovery, integration, application, and teaching, providing

a theoretical foundation for understanding the diverse capabilities required within higher education institutions.

The competency-based perspective provides a useful foundation for examining how academic capabilities can be identified, developed, and aligned with institutional objectives. Boyatzis (1982) conceptualized competencies as underlying characteristics associated with effective professional performance, highlighting the relationships among individual capabilities, organizational requirements, and performance outcomes. Applied to higher education, this perspective suggests that academic competency development requires more than the acquisition of isolated knowledge and skills. It involves establishing coherent institutional processes through which academic capabilities are continuously developed, supported, and aligned with universities' strategic priorities.

Strategic management offers an organizational perspective for addressing these requirements. Rather than treating professional development as a series of disconnected training activities, a strategic approach integrates competency development into institutional planning, resource allocation, organizational learning, and performance improvement. The dynamic capabilities perspective further highlights the importance of developing and reconfiguring organizational resources in response to changing environments (Teece, 2007). In higher education, this perspective provides a theoretical basis for examining how universities can align academic competency development with evolving educational demands, technological transformations, and knowledge-production requirements.

Within this strategic orientation, an enabling university environment represents an important organizational foundation for academic competency development. Institutional policies, leadership support, access to resources, professional autonomy, and opportunities for innovation can create conditions that encourage academic staff to develop and apply their capabilities. However, organizational support alone is insufficient unless it is accompanied by structured professional development opportunities that respond to actual competency requirements. Competency-based training therefore provides a complementary mechanism through which universities can connect professional learning activities with academic responsibilities and institutional development priorities (Boyatzis, 1982; Teece, 2007).

Academic learning communities constitute another important dimension of competency development. Wenger (1998) conceptualized learning as a social process through which individuals develop knowledge and professional identities through participation in shared practices. Within universities, this perspective highlights the potential contribution of collaborative learning, knowledge exchange, peer interaction, and shared professional experiences to academic development. Accordingly, academic learning communities can be understood as organizational mechanisms that complement formal training and facilitate the collective development of professional capabilities.

Although these dimensions offer complementary perspectives on academic development, their strategic integration requires further conceptual attention. An enabling institutional environment, competency-based training, and academic learning communities should not be approached as isolated development initiatives. Rather, they can be examined as interconnected organizational mechanisms through which universities support individual academic capabilities and collective institutional learning. Integrating these dimensions within a strategic management perspective provides an opportunity to connect academic competency development with broader institutional objectives and the requirements of knowledge-based higher education (Boyatzis, 1982; Teece, 2007; Wenger, 1998).

Against this background, the present paper develops an integrated conceptual framework for the strategic management of academic competency development in knowledge-based universities. Drawing on competency-based management, dynamic capabilities, and communities of practice, the proposed framework examines the complementary roles of organizational support, competency-based training, and collaborative academic learning. It seeks to provide a theoretical foundation for understanding how these dimensions can be strategically aligned to support academic development and institutional adaptability. In doing so, the paper contributes a conceptual perspective that positions academic competency development as an integrated strategic function rather than a collection of independent professional development activities.

2. Research Problem and Research Questions

The growing importance of knowledge, innovation, and human capital has expanded the strategic responsibilities of higher education institutions. Universities are increasingly expected to develop the academic capabilities required to respond to changing educational, technological, and

societal demands. Consequently, academic competency development represents an institutional priority that requires alignment between individual professional capabilities and broader organizational objectives (Boyer, 1990; International Commission on the Futures of Education, 2021).

Recent research has highlighted the growing importance of developing university teachers' professional and digital competencies. Zhao et al. (2021), in their systematic literature review of digital competence research in higher education, emphasized the need for institutions to develop appropriate learning strategies and tools to strengthen the digital capabilities of students and academic staff. Similarly, Basilotta-Gómez-Pablos et al. (2022) examined university teachers' digital competencies and highlighted the importance of practical and personalized professional development. These studies demonstrate the need to approach academic competency development as a continuous institutional responsibility rather than a limited set of individual training activities.

The importance of structured professional development is further supported by Lidolf and Pasco (2020), whose systematic review of empirical research on educational technology professional development identified different roles through which faculty members engage in professional learning, including those of learners, designers, and researchers. These findings provide a basis for considering academic staff development as a multidimensional process requiring appropriate institutional support and opportunities for professional engagement.

From a strategic management perspective, however, academic competency development cannot be reduced to training programmes. It requires coordinated attention to institutional policies, organizational resources, professional learning opportunities, and the alignment of individual capabilities with university priorities. The competency-based perspective provides a foundation for identifying and developing capabilities associated with effective professional performance (Boyatzis, 1982). The dynamic capabilities perspective further explains the importance of developing and reconfiguring organizational resources in response to changing environments (Teece, 2007), whereas communities of practice emphasize the contributions of participation, shared learning, and knowledge exchange to professional development (Wenger, 1998).

Taken together, these contributions offer valuable insights into academic competencies, professional development, and organizational learning. Nevertheless, a conceptual issue remains concerning how the organizational mechanisms supporting academic competency development can be integrated within a coherent strategic management framework. In particular, an enabling university environment, competency-based training, and academic learning communities represent distinct but potentially complementary dimensions. Examining these dimensions separately may provide only a partial understanding of how universities can strategically coordinate their resources and development practices to strengthen their academic capabilities.

Accordingly, the research problem addressed in this paper concerns the need to conceptualize the strategic integration of these three dimensions within knowledge-based universities. Rather than assessing their availability in a particular institutional setting, the paper examines their

complementary roles and conceptual relationships to develop an integrated framework that connects academic competency development with institutional strategic priorities. The proposed framework is conceptual in nature and is intended to provide a foundation for subsequent empirical investigation.

Central Research Question

How can the strategic management of academic competency development in knowledge-based universities be conceptualized through an integrated framework?

Subsidiary Research Questions

1. What theoretical foundations underpin the strategic management of academic competency development in knowledge-based universities?
2. What are the principal organizational dimensions supporting academic competency development, particularly an enabling university environment, competency-based training, and academic learning communities?
3. How can these dimensions be conceptually integrated within a strategic management framework for academic competency development?
4. What theoretical and practical implications can be derived from the proposed framework for the strategic management of academic competency development in higher education institutions?

3. Research objectives and significance

3.1 Research Objectives

The primary objective of this paper is to develop an integrated conceptual framework for the strategic management of academic competency development in knowledge-based universities and to derive actionable institutional directions for strengthening its three interrelated dimensions: an enabling university environment, competency-based training, and academic learning communities.

Specifically, the paper aims to do the following:

1. Examine the theoretical foundations of academic competency development and its relationship with strategic management in knowledge-based universities
2. Three principal organizational dimensions supporting academic competency development are identified and analyzed: an enabling university environment, competency-based training, and academic learning communities.
3. Explore the conceptual relationships among these dimensions and explain how their strategic integration may support academic competency development.
4. To develop an integrated conceptual framework that aligns academic competency development with institutional strategic priorities and the requirements of knowledge-based higher education.
5. Derive practical directions to inform university leaders and institutional planners in strengthening the organizational conditions and professional development practices that support academic competency development.

3.2 Research significance

The significance of this paper lies in its examination of academic competency development as an integrated strategic management function within knowledge-based

universities. In response to the evolving role of higher education institutions, this paper combines organizational, competency-based, and collaborative learning perspectives to provide a coherent conceptual foundation for academic development.

Its significance is reflected in two complementary areas:

3.2.1 Theoretical significance

This paper contributes to the conceptual understanding of academic competency development by integrating three complementary organizational dimensions: an enabling university environment, competency-based training, and academic learning communities.

Drawing on competency-based management, dynamic capabilities, and communities of practice, the proposed framework provides a basis for examining how institutional support, structured professional development, and collaborative learning may collectively contribute to academic capabilities (Boyatzis, 1982; Teece, 2007; Wenger, 1998.)

Furthermore, the framework offers a conceptual foundation for future research aimed at examining and empirically testing the proposed relationships among these dimensions within different higher education contexts.

3.2.2 Practical Significance

The proposed framework may assist university leaders, academic development units, and institutional planners in incorporating academic competency development into institutional strategic planning and professional development policies.

This highlights the importance of coordinating organizational support, competency-based training, and academic learning communities to strengthen the institutional conditions that enable academic staff to develop and apply their professional capabilities.

Furthermore, the framework may inform the design of context-sensitive institutional development initiatives and provide actionable directions for aligning academic competency development with universities' strategic priorities and knowledge-based institutional missions.

4. Research Methodology

4.1. Research Design

This paper adopts a conceptual and analytical research design informed by integrative literature synthesis. Conceptual research provides a means of combining established theoretical perspectives to develop new explanations and frameworks, whereas integrative synthesis enables the interpretation of contributions from related research domains (Jaakkola, 2020; Snyder, 2019; Torraco, 2005).

The study is designed to develop an integrated conceptual framework for the strategic management of academic competency development in knowledge-based universities. It draws on competency-based management, dynamic capabilities, and communities of practice as complementary theoretical perspectives for examining the organizational mechanisms that support academic competency development.

The research follows a theory-synthesis orientation, bringing together established concepts to explain how organizational support, competency-based professional development, and collaborative academic learning can be

understood from a coherent strategic management perspective (Jaakkola, 2020).

4.2. Literature Selection and Analytical Scope

The conceptual analysis draws on foundational theoretical contributions and relevant scholarly literature addressing academic competencies, strategic management, professional development, organizational learning, and knowledge-based higher education.

The literature is considered in relation to its conceptual relevance to the research questions and its contribution to explaining the three dimensions of the proposed framework: an enabling university environment, competency-based training, and academic learning communities.

The temporal scope of the literature is limited to publications issued up to and including 2022.

Foundational works published before this period are retained where they provide essential theoretical explanations.

The literature synthesis is intended to support conceptual integration rather than provide an exhaustive or statistically representative account of all publications in the field. Accordingly, the paper is not presented as a systematic literature review (Snyder, 2019; Torraco, 2005).

4.3. Conceptual Analysis and Framework Development

The development of the proposed framework is organized into four interrelated analytical stages.

Stage 1: Identification of theoretical foundations. The analysis examines competency-based management, dynamic capabilities, and communities of practice to establish the theoretical foundations of academic competency development and its strategic management.

Stage 2: Identification and interpretation of core dimensions. Three organizational dimensions are examined: an enabling university environment, competency-based training, and academic learning communities. Each dimension is analyzed in terms of its conceptual meaning and potential contribution to academic competency development.

Stage 3: Analysis of conceptual relationships. The analysis explores how the three dimensions may complement one another. Particular attention is given to the relationships between institutional conditions, structured professional development, and collaborative learning and to their alignment with universities' strategic priorities.

Stage 4: Integration and formulation of the conceptual framework. The theoretical perspectives and identified dimensions are synthesized into an integrated framework for the strategic management of academic competency development. The framework specifies the proposed relationships among its components and provides a basis for deriving institutional directions and future research propositions.

These stages are informed by conceptual framework analysis, which emphasizes the identification, interpretation, and integration of interrelated concepts (Jabareen, 2009).

4.4. Scope and Limitations

The paper focuses on the conceptual development of a strategic management framework rather than the empirical assessment of academic competencies at a particular university. It does not involve participant recruitment,

questionnaire administration, statistical hypothesis testing, or empirical validation.

The relationships proposed in the framework are theoretical and should not be interpreted as established causal effects. Their applicability and effectiveness across different institutional contexts require subsequent empirical investigation.

The framework is intended to provide an analytical foundation for university leaders, academic development units, and institutional planners while remaining open to contextual adaptation and further theoretical refinement.

5. Conceptual definitions

5.1. Knowledge-Based Universities

Knowledge-based universities are higher education institutions that place knowledge creation, dissemination, application, and innovation at the center of their educational, research, and societal missions. Their institutional development depends on the effective mobilization of intellectual resources, academic capabilities, and organizational learning in response to the requirements of a knowledge-based economy (Organization for Economic Co-operation and Development [OECD], 1996; International Commission on the Futures of Education, 2021).

In this paper, knowledge-based universities refer to institutions that strategically align academic competency development with knowledge production, innovation, and long-term institutional priorities.

5.2. Academic Competencies

Academic competencies refer to the integrated knowledge, skills, capabilities, and professional attributes that enable academic staff to perform their teaching, research, and institutional responsibilities effectively. This understanding draws on the competency-based perspective of professional performance and the multidimensional nature of academic work (Boyatzis, 1982; Boyer, 1990). Recent research has highlighted the importance of digital competencies as an essential component of university teachers' professional capabilities (Basilotta-Gómez-Pablos et al., 2022).

In this paper, academic competencies encompass teaching and research capabilities, digital proficiency, collaboration, academic leadership, and continuous professional learning.

5.3. Strategic Management of Academic Competency Development

The strategic management of academic competency development refers to the coordinated institutional processes through which universities identify, develop, support, and align academic capabilities with their long-term strategic priorities.

In this paper, the concept involves integrating competency development into institutional planning, resource allocation, organizational support, and collaborative professional learning. It is informed by competency-based management and the dynamic capabilities perspective, which emphasize the alignment and development of capabilities in response to organizational requirements and changing environments (Boyatzis, 1982; Teece, 2007).

5.4. Enabling University Environment

An enabling university environment refers to the organizational conditions that facilitate academic staff development and the effective application of professional competencies.

Within the proposed framework, these conditions include supportive academic leadership, appropriate institutional policies, access to resources, professional autonomy, opportunities for innovation, and a culture of continuous learning.

This conceptualization is informed by research highlighting the importance of supportive and engaging learning environments in faculty development (Hughes et al., 2022).

5.5. Competency-based training

Competency-based training refers to a structured approach to professional development in which learning needs, training activities, and intended outcomes are aligned with the competencies required for effective professional performance (Boyatzis, 1982).

This paper refers to institutional development practices designed to strengthen academic staff capabilities in accordance with their professional responsibilities and universities' strategic priorities. Such practices may include needs assessment, targeted training, active learning, and opportunities to apply acquired competencies in academic settings (Lidolf & Pasco, 2020; Sirianni et al., 2020).

5.6. Academic Learning Communities

Academic learning communities refer to collaborative professional settings in which academic staff develop and exchange knowledge through shared practices, professional interaction, reflection, and collective learning. This conceptualization is informed by the community-of-practice perspective, which regards learning as a social process grounded in participation and shared professional activity (Wenger, 1998).

In this paper, academic learning communities represent an organizational mechanism that complements formal training through peer collaboration, shared professional experiences, and collective knowledge development. Recent research on collaborative faculty development in higher education provides additional support for this perspective (Hervas, 2021).

6. Theoretical findings

6.1. Knowledge-Based Universities and Strategic Management

The transition toward a knowledge-based economy has reshaped the relationship between higher education, human capital, and institutional development. Knowledge is increasingly recognized not merely as an accumulated resource but also as a productive capacity generated through learning, research, innovation, and the exchange of expertise. From this perspective, universities occupy a distinctive position within knowledge-based systems because they contribute simultaneously to the creation of

new knowledge, the development of professional capabilities, and the application of research to societal needs (Organization for Economic Co-operation and Development [OECD], 1996). Their strategic importance therefore extends beyond the provision of academic qualifications to the sustained development of the intellectual and organizational capacities through which knowledge can be created and mobilized.

A knowledge-based university should not be understood simply as an institution equipped with advanced technologies or extensive research infrastructure. Rather, its defining characteristics lie in its capacity to connect teaching, research, professional learning, and societal engagement within a coherent institutional direction. Boyer (1990) broadened the understanding of academic scholarship by recognizing discovery, integration, application, and teaching as interconnected forms of academic work. More recently, the International Commission on the Futures of Education (2021) emphasized the responsibility of higher education institutions to advance research, strengthen shared knowledge, and contribute to inclusive and sustainable futures. Taken together, these perspectives suggest that the knowledge-based university depends on both the capabilities of its academic staff and the organizational conditions that enable those capabilities to develop and contribute to institutional purposes.

This expanded understanding of the university has important implications for educational administration. As universities respond to changing educational demands, technological developments, and increasingly complex societal expectations, academic competency development cannot remain a collection of isolated training activities. It requires strategic attention to the capabilities needed for institutional priorities, the conditions under which academic staff undertake their work, and the processes through which professional knowledge is renewed. Strategic management provides a means of connecting these considerations by aligning institutional objectives, human development, resource allocation, and organizational learning.

The dynamic capabilities perspective offers a useful theoretical lens for understanding this alignment. Teece (2007) identifies the organizational importance of recognizing emerging opportunities and challenges, mobilizing resources in response, and reconfiguring capabilities as circumstances change. Although this perspective originated in strategic management rather than higher education, it provides a conceptual basis for examining how universities may anticipate evolving academic requirements and adapt their development practices accordingly. Applied to the present study, strategic management involves more than identifying existing competency gaps; it also entails developing institutional capacity to respond to future changes in teaching, research, technology, and academic collaboration. Figure 1 illustrates the conceptual relationships among the knowledge-based university, strategic management processes, and three complementary dimensions of academic competency development.

Figure1. Knowledge-Based Universities and Strategic Management of Academic Competency Development



Note. Developed by the author on the basis of a conceptual synthesis of OECD (1996), Boyer (1990), Teece (2007), and the International Commission on the Futures of Education (2021). The proposed relationships have not been empirically validated.

Recent higher education research has reinforced the need to consider institutional transformation alongside individual professional capabilities. Basilotta-Gómez-Pablos et al. (2022), in their systematic review of university teachers' digital competencies, highlighted the growing importance of the knowledge, skills, and attitudes required for the effective educational use of technology. This perspective suggests that academic competency development should be considered within a broader institutional context rather than treated solely as an individual responsibility.

Accordingly, this paper conceptualizes the strategic management of academic competency development as an institutionally coordinated process that links long-term university priorities with the continuous development of academic staff. Within this process, the enabling university environment establishes the organizational conditions for professional growth; competency-based training addresses identified and emerging development needs; and academic learning communities facilitate the exchange, application, and renewal of professional knowledge. These dimensions are treated as complementary components of the proposed framework rather than as independent or empirically established causal factors.

This conceptual position provides the foundation for the following sections. The discussion first examines the nature and domains of academic competencies and then considers the theoretical perspectives that explain their development before the three strategic dimensions are integrated into a framework appropriate for knowledge-based universities.

6.2. Academic Competency Development in Higher Education

Academic competency development has become an important consideration in the strategic management of higher education institutions. As universities respond to changing expectations concerning teaching, research, digital transformation, and societal engagement, the professional capabilities required by academic staff extend beyond disciplinary expertise. Academic work increasingly involves the integration of pedagogical knowledge,

research capabilities, technological proficiency, collaboration, and the capacity for continuous professional learning. Accordingly, competency development needs to be understood as an ongoing institutional concern rather than a series of discrete professional development activities.

The competency-based perspective provides a foundation for understanding this broader conception of academic capability. Boyatzis (1982) conceptualized competencies in relation to the characteristics associated with effective professional performance. In higher education, however, academic competencies must also be interpreted in relation to the distinctive purposes and responsibilities of universities. Boyer (1990) identified discovery, integration, application, and teaching as interconnected dimensions of scholarship, thereby offering a basis for recognizing the diversity of academic contributions. From this perspective, academic competency development involves strengthening the capabilities through which university staff undertake their educational, scholarly, and institutional roles.

Recent research has paid particular attention to the changing competency requirements associated with technology-enhanced higher education. Basilotta-Gómez-Pablos et al. (2022), through a systematic literature review, examined university teachers' digital competencies and highlighted the importance of integrating technological knowledge with pedagogical practice. Similarly, Zhao et al. (2021) reviewed research on digital competence in higher education, demonstrating the relevance of digital capability to contemporary academic development. These contributions support the inclusion of digital competencies within a broader academic competency framework while also indicating that technological proficiency should not be treated as a substitute for pedagogical, research, or collaborative capabilities.

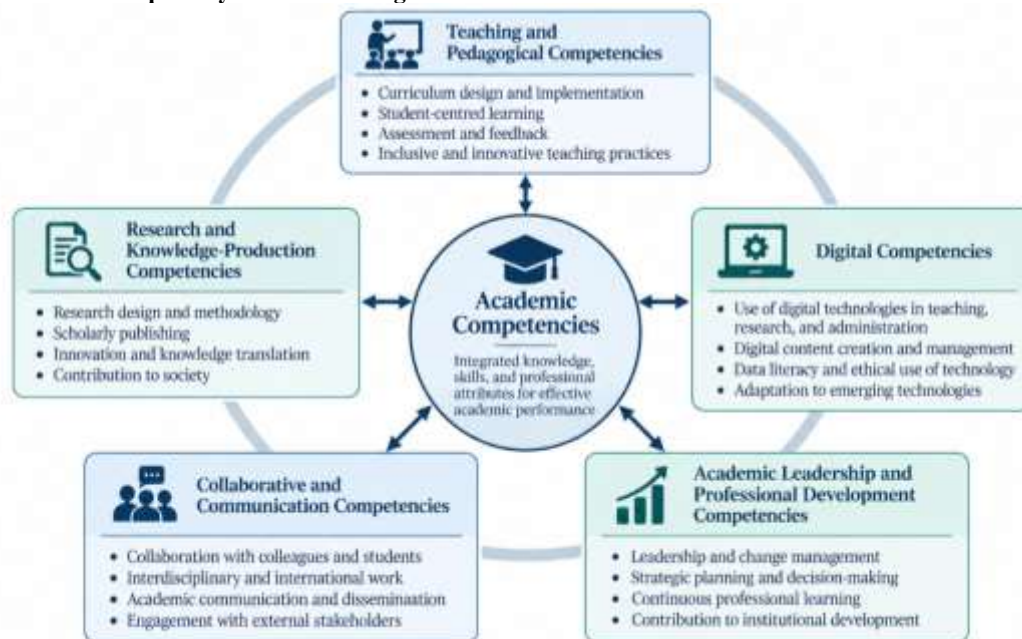
For the purposes of this paper, academic competencies are organized into five interrelated domains: teaching and pedagogical competencies, research and knowledge-production competencies, digital competencies, collaborative and communication competencies, and academic leadership and professional development competencies. This classification is proposed as a conceptual synthesis of the multidimensional nature of academic work rather than as a previously validated measurement instrument.

Teaching and pedagogical competencies encompass the capabilities required to design learning experiences, facilitate student engagement, assess learning, and adapt

educational practices to changing learner needs. Research and knowledge-production competencies concern the capacity to formulate research problems, apply appropriate methodologies, generate and communicate knowledge, and contribute to scholarly development. Digital competencies involve the informed and purposeful use of digital technologies in teaching, research, communication, and academic work. Collaborative and communication competencies support interdisciplinary interaction, knowledge exchange, and professional participation, whereas academic leadership and professional development competencies concern initiative, reflective practice, mentoring, and the continuous renewal of academic capabilities.

To provide a clearer understanding of the multidimensional nature of academic competencies, Figure 2 presents the five interrelated domains adopted in this paper: teaching and pedagogical competencies, research and knowledge-production competencies, digital competencies, collaborative and communication competencies, and academic leadership and professional development competencies. The figure illustrates how these domains collectively contribute to academic staff capabilities while remaining interconnected in professional practice. This classification represents an author-developed conceptual synthesis informed by the multidimensional understanding of academic scholarship and recent research on academic competencies in higher education (Boyer, 1990; Basilotta-Gómez-Pablos et al., 2022; Zhao et al., 2021).

Figure 2. Academic Competency Domains in Higher Education



Note. The author developed a conceptual synthesis informed by Boyer (1990), Basilotta-Gómez-Pablos et al. (2022), and Zhao et al. (2021). The five domains constitute a proposed analytical classification and have not been empirically validated as a measurement model.

Although these domains can be distinguished analytically, they are closely connected in professional practice. Effective academic development therefore requires more than providing separate training opportunities for individual skills. It involves recognizing how competencies interact across academic responsibilities and how institutional arrangements can support their development and application. Research on educational technology professional development in higher education has highlighted the importance of the design and implementation of development initiatives, reinforcing the need to consider professional learning as an organized process (Lidolf & Pasco, 2020).

Within the strategic management perspective adopted in this paper, competency development begins by identifying the capabilities required to advance institutional priorities and extends to creating opportunities for their continuous renewal. Universities must therefore consider both existing professional requirements and emerging demands associated with educational innovation, research practices, and changing forms of academic collaboration. The development of academic competencies is consequently

conceptualized as a shared responsibility involving academic staff and institutional leadership.

This understanding establishes an important distinction between the domains of academic competencies and the strategic dimensions through which they are developed. The five domains describe the professional capabilities to be strengthened, whereas the enabling university environment, competency-based training, and academic learning communities represent the three complementary institutional dimensions proposed to support their development. This distinction provides the basis for the theoretical discussion and subsequent construction of the integrated conceptual framework.

6.3. Theoretical Perspectives Underpinning the Proposed Framework

The development of academic competencies in knowledge-based universities requires a theoretical explanation that connects individual professional capabilities with institutional strategy and collaborative learning. No single perspective adequately captures these interconnected concerns. Accordingly, the proposed framework draws on

three complementary theoretical perspectives: the competency-based perspective, the dynamic capabilities perspective, and the communities of practice perspective. Their integration provides a basis for explaining what universities seek to develop, how institutional priorities guide that development, and how professional knowledge is shared and renewed.

6.3.1. The Competency-Based Perspective

The competency-based perspective provides the first theoretical foundation for the proposed framework. Boyatzis (1982) established an influential understanding of competencies as characteristics associated with effective professional performance. Rather than treating professional development as the accumulation of qualifications or participation in training activities, this perspective directs attention to the knowledge, skills, and attributes required to undertake particular responsibilities.

In higher education, the competency-based perspective is especially relevant because academic work encompasses multiple responsibilities that evolve over time. Teaching, research, digital practice, collaboration, and academic leadership require different but interrelated capabilities. Consequently, a competency-oriented approach enables universities to identify development priorities in relation to academic roles rather than relying exclusively on standardized training programmes.

Recent research on educational technology professional development illustrates the value of this orientation. Lidolf and Pasco (2020) identified different ways in which university faculty engage in technology-related professional development, including their roles as learners, designers, and researchers. Their findings suggest that development opportunities should recognize the diversity of academic practices and the different forms of professional engagement involved in educational change.

For the present paper, the competency-based perspective informs the identification of academic development needs, the alignment of training with professional responsibilities, and the consideration of how acquired capabilities can be applied in academic practice. However, it does not independently explain how universities adapt their competency priorities to changing institutional environments. This limitation establishes the need for a complementary strategic perspective.

6.3.2. Dynamic Capabilities Perspective

The dynamic capabilities perspective provides the strategic dimension of the proposed framework. Teece (2007) explains organizational adaptation through the interrelated processes of sensing opportunities and challenges, seizing opportunities, and reconfiguring organizational resources and capabilities. These processes offer a useful analytical basis for understanding how institutions respond to changing environments.

Applied conceptually to higher education, sensing involves recognizing emerging requirements in teaching, research, digital transformation, and societal engagement. Seizing involves translating these requirements into institutional priorities, professional development initiatives, and resource commitments. Reconfiguring concerns the adjustment of organizational arrangements and existing capabilities to support changing academic responsibilities. This interpretation extends academic competency development beyond the identification of current performance gaps. It positions development as an ongoing

strategic process through which universities anticipate future needs and align academic capabilities with the institutional direction.

The application of dynamic capabilities theory to universities in this paper is an analytical adaptation, not a claim that Teece's original model was developed specifically for higher education. Its contribution lies in explaining the organizational processes through which competency development can become part of institutional strategy rather than remaining an isolated personnel activity.

Nevertheless, strategic alignment alone does not explain how academic knowledge develops through everyday interaction among colleagues. A third perspective is therefore needed to account for the social and collaborative character of professional learning.

6.3.3. The Communities of Practice Perspective

The communities of practice perspective provides the collaborative learning foundation of the proposed framework. Wenger (1998) conceptualizes learning as a social process in which participation, shared practice, and the negotiation of meaning contribute to the development of professional knowledge and identity.

In university settings, this perspective draws attention to the professional learning that occurs through academic interaction. Faculty members develop their capabilities not only through formal training but also through discussing teaching practices, exchanging research experiences, mentoring colleagues, addressing shared problems, and participating in collaborative academic activities.

Academic learning communities therefore offer a means of connecting individual development with collective knowledge creation. They can support the exchange of experience across academic roles and provide opportunities for reflecting on and refining professional practice.

Within the proposed framework, the communities of practice perspective explains why competency development should include structured opportunities for peer interaction and shared learning. It also clarifies the complementary relationship between formal competency-based training and collaborative professional development: the former addresses identified learning needs, whereas the latter creates opportunities for knowledge exchange, reflection, and continued learning.

6.3.4. Integrating the Three Theoretical Perspectives

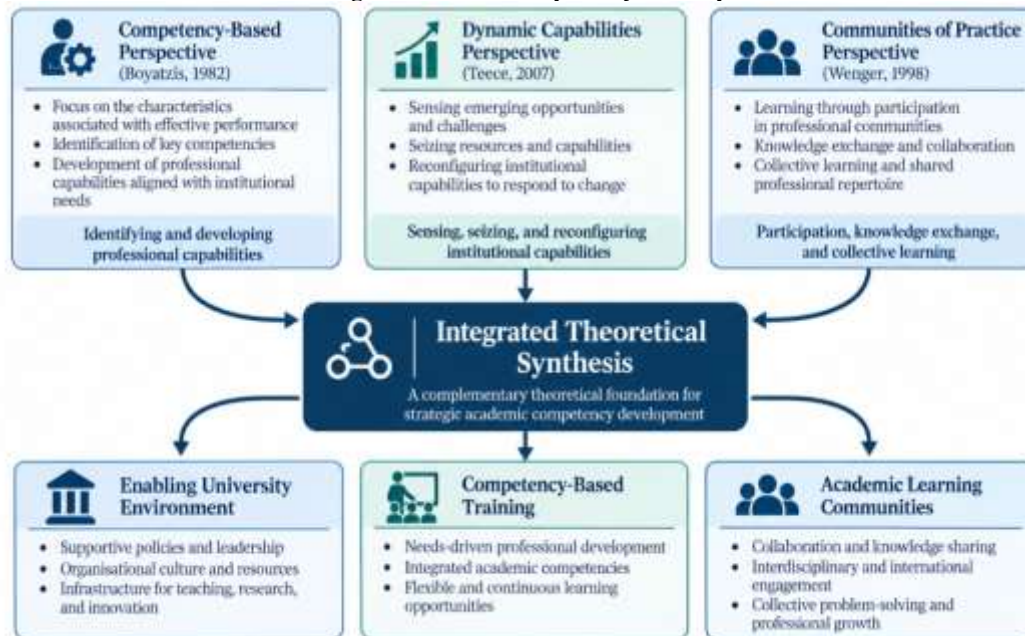
The three perspectives address different but interconnected aspects of academic competency development. The competency-based perspective clarifies the professional capabilities that require development. The dynamic capabilities perspective explains how universities can identify changing requirements and align development priorities with institutional strategies. The communities of practice perspective explains how professional knowledge can be exchanged, interpreted, and renewed through participation in shared academic activities.

Their integration provides the theoretical rationale for the three strategic dimensions adopted in this paper. The enabling university environment establishes the organizational conditions and resources required for development; competency-based training translates identified professional needs into targeted learning opportunities; and academic learning communities support collaborative knowledge development and the application of professional learning.

Importantly, these relationships are proposed conceptually. The framework does not assume that the three perspectives are interchangeable or that their integration has already been empirically validated. Instead, it uses their complementary explanatory contributions to construct a coherent account of strategic academic competency development.

The synthesis is consistent with the methodological purpose of conceptual research, in which established theoretical perspectives may be combined to develop an integrated explanation of a phenomenon (Jaakkola, 2020). Figure 3 summarizes the distinct contributions of the three perspectives and illustrates how they inform the proposed institutional dimensions.

Figure 3. Theoretical Foundations of Strategic Academic Competency Development



Note. The author developed a theoretical synthesis informed by Boyatzis (1982), Teece (2007), and Wenger (1998). The diagram illustrates the proposed conceptual relationships rather than empirically established causal effects.

6.4. Strategic Dimensions of Academic Competency Development

The strategic development of academic competencies requires an institutional approach that connects professional learning with organizational priorities, resources, and collaborative practices. Although individual academic staff members are responsible for engaging in their own professional development, universities influence the conditions under which such development becomes possible, relevant, and sustainable. Accordingly, the present paper proposes three complementary strategic dimensions: an enabling university environment, competency-based training, and academic learning communities.

These dimensions are informed by the theoretical synthesis developed in the preceding section. The competency-based perspective clarifies the professional capabilities that require development; the dynamic capabilities perspective emphasizes strategic alignment and institutional adaptation; and the communities of practice perspective explains the contribution of participation and knowledge exchange to professional learning (Boyatzis, 1982; Teece, 2007; Wenger, 1998).

The three dimensions are discussed below as interrelated institutional mechanisms rather than independent interventions.

6.4.1. Enabling University Environment

An enabling university environment constitutes the organizational foundation for academic competency development. It encompasses the institutional policies,

leadership practices, resources, and cultural conditions that support academic staff in developing and applying their professional capabilities. From a strategic management perspective, professional development is unlikely to achieve its intended institutional contribution if learning opportunities are disconnected from academic responsibilities or constrained by organizational arrangements.

Supportive academic leadership plays an important role in establishing this environment. University leaders can facilitate professional growth by communicating development priorities, encouraging academic initiative, providing opportunities for participation, and aligning resources with institutional objectives. Such practices are particularly relevant in knowledge-based universities, where teaching, research, innovation, and societal engagement depend on the continuous development of academic capabilities.

An enabling environment also requires appropriate organizational arrangements. These may include accessible digital infrastructure, research support, opportunities for interdisciplinary collaboration, transparent development policies, and sufficient time for professional learning. The purpose is not simply to increase the availability of resources but also to ensure that institutional arrangements support the effective use and development of academic expertise.

The dynamic capabilities perspective provides a strategic explanation for this dimension. Universities need organizational arrangements that allow them to recognize emerging academic requirements, respond to changing

priorities, and adjust existing capabilities (Teece, 2007). An enabling environment therefore supports institutional adaptability by creating conditions in which academic staff can engage with new knowledge, experiment with professional practices, and contribute to organizational learning.

Within the proposed framework, this dimension is conceptualized as the institutional foundation that supports the other two dimensions. Competency-based training requires organizational commitment and resources, whereas academic learning communities depend on opportunities for interaction, professional trust, and collaborative engagement. Consequently, an enabling university environment is treated as a necessary organizational consideration in strategic academic competency development, although its specific contribution remains subject to future empirical examination.

6.4.2. Competency-based training

Competency-based training represents the structured professional development dimension of the proposed framework. Its central principle is that training should be designed around the capabilities required for effective professional practice rather than organized exclusively according to the availability of courses or the number of training hours completed.

The competency-based perspective provides the conceptual foundation for this approach by connecting professional capabilities with role requirements and effective performance (Boyatzis, 1982). In higher education, this orientation requires universities to identify relevant academic competencies, examine existing and emerging development needs, and design learning opportunities that reflect the diversity of academic responsibilities.

A strategically coordinated training process may involve competency identification, development needs assessment, targeted programme design, opportunities for practical application, and subsequent review. These activities should be connected to institutional priorities while remaining responsive to differences in academic disciplines, professional experience, and individual development needs.

Research on educational technology professional development in higher education has demonstrated the diversity of faculty engagement in professional learning. Lidolf and Pasco (2020) conducted empirical research concerning educational technology professional development and identified different approaches through which faculty participate in such initiatives. This finding reinforces the importance of designing development activities that reflect the nature of academic work rather than assuming that a single training format is appropriate for all professional needs.

Competency-based training should also extend beyond technical skill acquisition. The multidimensional understanding of academic competencies developed in Section 6.2 suggests that training priorities may address pedagogical practice, research capabilities, digital proficiency, collaboration, and academic leadership. Basilotta-Gómez-Pablos et al. (2022), for example, highlighted the importance of digital competencies among university teachers, supporting their inclusion within contemporary professional development priorities.

Within the proposed framework, competency-based training translates strategic development priorities into organized learning opportunities. Its effectiveness, however, cannot be assumed from programme participation alone. Universities should consider how acquired competencies can be applied in academic practice and how development activities can be reviewed in relation to their intended purposes. This establishes a connection between structured training, organizational support, and continued professional learning.

6.4.3. Academic Learning Communities

Academic learning communities represent the collaborative dimension of strategic academic competency development. They provide opportunities for academic staff to exchange knowledge, reflect on professional experience, discuss shared challenges, and develop practices through sustained interaction.

The communities of practice perspective explains the theoretical significance of this dimension. Wenger (1998) conceptualizes learning as a social process grounded in participation and shared practice. Applied to higher education, this perspective suggests that academic development occurs not only through formal programmes but also through the professional relationships and collaborative activities in which academic staff participate. Academic learning communities may take different forms, including teaching development groups, research networks, peer mentoring arrangements, interdisciplinary teams, and collaborative inquiry initiatives. Their defining contribution lies in creating opportunities for professional knowledge to be exchanged, interpreted, and developed through shared academic activity.

These communities are particularly relevant to knowledge-based universities because academic knowledge is not confined to individual expertise. Teaching practices can be refined through peer discussion, research capabilities can develop through collaboration, and emerging professional challenges can be addressed through collective reflection. Academic learning communities thus provide a mechanism for connecting individual professional learning with wider institutional knowledge development.

However, the existence of collaborative groups does not automatically ensure meaningful professional learning. Their contribution depends on opportunities for sustained participation, shared professional purposes, institutional support, and engagement with relevant academic practices. For this reason, the proposed framework places academic learning communities alongside an enabling university environment and competency-based training rather than treating them as a substitute for either dimension.

Within the framework, academic learning communities complement formal training by creating opportunities to exchange experience, reflecting on acquired knowledge, and exploring its application in academic settings. They also provide a collaborative context through which emerging competency needs may become visible to academic staff and institutional leadership.

6.4.4. Strategic Integration of the Three Dimensions

The three strategic dimensions address distinct but complementary aspects of academic competency development. The enabling university environment concerns the organizational conditions that support professional growth. Competency-based training concerns the structured identification and development of

professional capabilities. Academic learning communities concern the collaborative processes through which professional knowledge is exchanged and renewed.

Their strategic integration is central to the proposed framework. An enabling environment can provide the resources and institutional support required for development activities; competency-based training can address identified professional learning needs; and academic learning communities can create opportunities for shared reflection and continued knowledge development.

The relationship between these dimensions should not be understood as a rigid sequence. Professional learning may reveal new organizational requirements, collaborative activities may identify emerging training needs, and changes in institutional priorities may require adjustments across all three dimensions. The proposed integration therefore emphasizes coordination and continuous

adaptation rather than a fixed progression from one activity to another.

From a strategic management perspective, the value of this integration lies in connecting academic competency development with the university's broader institutional direction. Rather than treating professional development as a separate administrative function, the framework positions it within institutional planning, organizational learning, and the renewal of academic capabilities.

To illustrate this integration, Figure 4 presents the three strategic dimensions and their proposed relationships with the institutional priorities of knowledge-based universities. The figure highlights the complementary contributions of organizational support, structured professional development, and collaborative learning to strategically coordinated academic competency development. It also emphasizes that the relationships among these dimensions are conceptual propositions requiring subsequent empirical examination.

Figure 4. Strategic Dimensions of Academic Competency Development



Note. Author-developed conceptual synthesis was informed by Boyatzis (1982), Teece (2007), and Wenger (1998). The proposed relationships are conceptual and have not been empirically validated.

7. Development of the Integrated Conceptual Framework

7.1. Rationale and Conceptual Basis

The development of an integrated conceptual framework for academic competency development responds to the need for a coherent institutional approach that connects professional capabilities with the strategic priorities of knowledge-based universities. As established in the preceding sections, academic competencies encompass interconnected teaching, research, digital, collaborative, and leadership-related capabilities. Their development therefore requires more than the provision of separate training activities; it calls for an organizational approach that aligns professional learning, institutional support, and collective knowledge development.

The proposed framework is grounded in the complementary contributions of the competency-based perspective, the dynamic capabilities perspective, and the

communities of practice perspective. The competency-based perspective provides a basis for identifying and developing the capabilities associated with academic responsibilities (Boyatzis, 1982). The dynamic capabilities perspective explains how institutions can recognize changing requirements, mobilize resources, and renew organizational capabilities (Teece, 2007). The communities of practice perspective highlights the contribution of participation, shared practice, and collaborative learning to professional knowledge development (Wenger, 1998).

Rather than treating these perspectives as separate explanatory accounts, the present paper brings them together to establish a conceptual connection between individual competency development and institutional strategic management. This integration is consistent with the purpose of conceptual research, which can contribute to knowledge by synthesizing existing perspectives and

developing new relationships between established concepts (Jaakkola, 2020; Jabareen, 2009).

The resulting framework is organized around three complementary strategic dimensions: an enabling university environment, competency-based training, and academic learning communities. These dimensions are connected through institutional planning, strategic coordination, implementation, and continuous review. Their proposed integration constitutes the principal conceptual contribution of this paper.

7.2. Architecture of the proposed framework

The framework comprises four interconnected levels: strategic orientation, institutional development mechanisms, academic competency development, and strategic review and renewal. These levels are presented as analytical components of an integrated approach rather than as a rigid sequence of administrative procedures.

The first level, strategic orientation, establishes the connection between university priorities and academic development requirements. It involves identifying the capabilities needed to support quality teaching, research and innovation, digital transformation, and societal engagement. At this level, institutional leadership considers both current professional requirements and emerging demands associated with the university's long-term direction.

The second level, institutional development mechanisms, comprises three strategic dimensions. An enabling university environment provides supportive policies, leadership, resources, and opportunities for professional growth. Competency-based training translates identified needs into targeted learning activities and opportunities for application. Academic learning communities facilitate professional interaction, knowledge exchange, reflection, and collaborative development.

The third level, academic competency development, concerns the professional capabilities that the framework seeks to strengthen. Consistent with Section 6.2, these include teaching and pedagogical competencies, research and knowledge-production competencies, digital competencies, collaborative and communication competencies, and academic leadership and professional development competencies. These domains represent the intended focus of development rather than the outcomes already demonstrated by the present study.

The fourth level, strategic review and renewal, connects development activities with continuing institutional learning. It involves examining the relevance of competency priorities, reviewing implementation processes, gathering feedback from academic staff, and considering whether organizational arrangements require adjustment. This level reflects the dynamic capabilities perspective by treating institutional development as an adaptive process rather than a one-time intervention (Teece, 2007).

The four levels are interconnected. Strategic priorities inform development mechanisms, while implementation experience and professional learning may reveal new needs that require changes in institutional policies, training provision, or collaborative arrangements. The framework therefore incorporates feedback and renewal as continuing features of strategic academic competency development.

7.3. Proposed Relationships Among the Framework Components

The central proposition of the framework is that academic competency development should be strategically coordinated across organizational, instructional, and collaborative dimensions. Drawing on the dynamic capabilities perspective (Teece, 2007), the framework conceptualizes institutional development as an adaptive process in which organizational arrangements are reviewed and adjusted in response to changing academic requirements. The enabling university environment provides the institutional conditions within which competency-based training and academic learning communities can operate. Training offers structured opportunities to address identified development needs, while learning communities support professional interaction, shared learning, and knowledge exchange (Boyatzis, 1982; Wenger, 1998).

These relationships are reciprocal rather than exclusively linear. Academic learning communities may reveal emerging competency gaps, which can inform the design of subsequent training activities. Similarly, the implementation of training programmes may identify organizational barriers that require changes in institutional policies or resources. This interpretation draws on the collaborative learning perspective of Wenger (1998) and the organizational adaptation perspective of Teece (2007). Strategic review connects these experiences with the university's wider planning and development processes.

The framework also distinguishes between development mechanisms and competency domains. The three strategic dimensions describe how universities may organize and support development, whereas the five competency domains describe the professional capabilities that such development seeks to strengthen. This distinction is informed by the competency-based perspective (Boyatzis, 1982) and the broader understanding of academic responsibilities presented by Boyer (1990). Maintaining this distinction avoids treating training activities, institutional conditions, and professional capabilities as interchangeable concepts.

Based on this theoretical synthesis, the framework advances three interrelated conceptual propositions:

Proposition 1. Strategic Alignment. Strategic alignment between institutional priorities and academic development needs provides a basis for coordinating competency development activities.

Proposition 2. Complementary Development Mechanisms. An enabling university environment, competency-based training, and academic learning communities constitute complementary institutional mechanisms for supporting academic competency development.

Proposition 3. Continuous Review and Renewal. Continuous review and feedback provide a mechanism through which universities may reconsider competency priorities and adapt their development arrangements in response to emerging requirements.

These propositions represent an original conceptual synthesis informed by the competency-based perspective, dynamic capabilities perspective, and communities of practice perspective (Boyatzis, 1982; Teece, 2007; Wenger, 1998). They are not presented as empirically tested hypotheses or established causal relationships. Their purpose is to clarify the proposed relationships among the framework components and provide a theoretical basis for subsequent empirical investigation.

7.4. Institutional Implementation of the Proposed Framework

Translating the framework into institutional practice requires a coordinated process that connects strategic planning with professional development activities. The following implementation stages are proposed as practical directions for university administrators. They are not presented as procedures that have already been implemented or evaluated in the present study.

Stage 1. Strategic Diagnosis and Competency Mapping

The initial stage involves examining institutional priorities and identifying the academic competencies required to support them. Universities may consider strategic plans, academic responsibilities, emerging educational requirements, and the professional development needs expressed by academic staff.

Competency mapping should address the five domains identified in Section 6.2 while recognizing differences between disciplines, academic roles, and career stages. The purpose is to establish a coherent basis for subsequent development decisions rather than impose an identical competency profile on all academic staff.

Stage 2. Establishing Institutional Enablers

The second stage concerns the organizational conditions required for implementation. University leaders should consider the availability of appropriate policies, resources, digital infrastructure, professional development opportunities, and mechanisms for academic participation. Particular attention should be given to connecting development priorities with institutional planning and resource allocation. This stage provides the organizational foundation for the coordinated implementation of the three strategic dimensions.

Stage 3. Designing Integrated Development Activities

At this stage, identified competency needs are translated into development activities. Competency-based training may include targeted programs, mentoring, practical workshops, and opportunities for applying acquired knowledge in academic settings.

These activities should be complemented by academic learning communities that facilitate professional dialog, peer collaboration, shared reflection, and the exchange of experience. Integration is important because formal training and collaborative learning address different aspects of professional development.

Stage 4. Implementation and Academic Engagement

Implementation requires the participation of academic staff, academic leaders, and relevant institutional development units. Responsibilities should be clarified, whereas opportunities for feedback and professional participation should remain available throughout the process.

The proposed framework recognizes academic staff as active participants in development rather than passive recipients of centrally designed programmes. Their

professional experience can inform the refinement of training priorities and collaborative arrangements.

Stage 5. Strategic Review and Continuous Renewal

The final stage involves reviewing the implementation process and reconsidering development priorities. Universities may examine participation, the relevance of development activities, opportunities for applying acquired competencies, and feedback concerning organizational support.

This review should inform subsequent decisions about institutional arrangements and professional development provisions. Consistent with the dynamic capabilities perspective, the purpose is to support continuing adaptation as academic and institutional requirements evolve (Teece, 2007).

The stages are intended to provide an adaptable implementation guide. The practical suitability and effectiveness of these methods require investigation in different institutional settings.

7.5. The Integrated Conceptual Framework

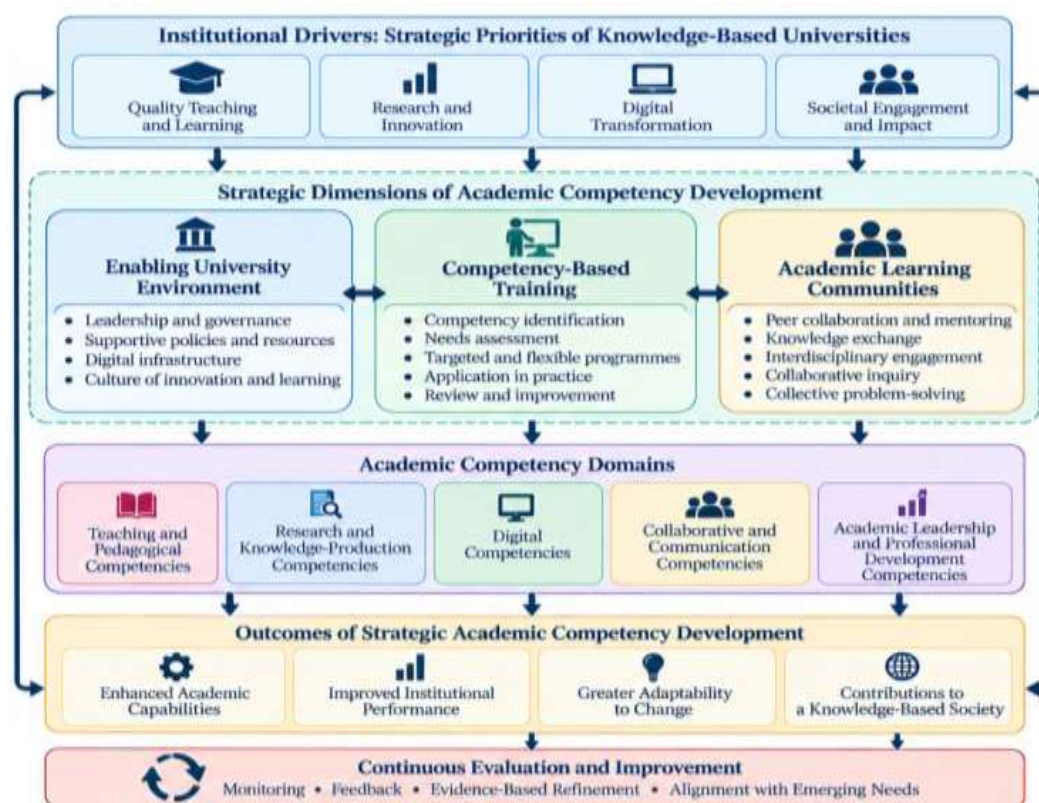
The proposed framework combines the theoretical foundations, institutional development mechanisms, competency domains, and implementation processes discussed throughout this paper. Its distinctive contribution lies in positioning academic competency development within an integrated strategic management process rather than treating it as an isolated training function.

At the institutional level, strategic orientation identifies development priorities. At the operational level, the three complementary dimensions provide mechanisms for supporting professional growth. At the academic level, development activities address the five competency domains. Strategic review then connects implementation experience with continuing institutional adaptation.

Figure 5 presents the integrated conceptual framework developed in this paper. It illustrates how the strategic priorities of knowledge-based universities can inform three complementary institutional development mechanisms: an enabling university environment, competency-based training, and academic learning communities which collectively address five domains of academic competencies. The framework also incorporates implementation and feedback processes to support strategic review and continuous renewal. The relationships shown represent an author-developed conceptual synthesis informed by the competency-based, dynamic capabilities, and communities of practice perspectives (Boyatzis, 1982; Teece, 2007; Wenger, 1998). They are proposed for future empirical examination rather than being presented as validated causal relationships.

The framework is intended to guide conceptual understanding and provide a basis for subsequent empirical investigation. It does not establish that the proposed relationships produce particular performance outcomes, nor does it claim that the framework has undergone expert validation or statistical testing.

Figure 5. Proposed Integrated Conceptual Framework for Strategic Academic Competency Development in Knowledge-Based Universities



Note. Author-developed conceptual framework informed by Boyatzis (1982), Teece (2007), and Wenger (1998). The proposed relationships and implementation processes have not been empirically validated.

As illustrated in Figure 5, the framework connects institutional strategic direction with the mechanisms and domains of academic competency development. Its contribution is therefore both integrative and practice-oriented: it provides a conceptual explanation of how the three strategic dimensions may be coordinated and identifies implementation processes that university administrators can consider when designing development initiatives. The following section discusses the theoretical contributions, practical implications, and limitations of the proposed framework.

8. Discussion and practical implications

8.1. Discussion of the Proposed Framework

The proposed integrated conceptual framework advances an institutional understanding of academic competency development in knowledge-based universities. Rather than approaching professional development as a collection of independent training activities, the framework positions it within a coordinated strategic process that connects institutional priorities, organizational conditions, structured professional learning, and collaborative knowledge development.

This approach responds to the multidimensional character of academic work. Boyer (1990) demonstrated that academic scholarship encompasses interconnected responsibilities extending beyond research alone. Contemporary developments have further expanded the professional capabilities expected of academic staff, particularly in relation to digital teaching and learning. Basilotta-Gómez-Pablos et al. (2022) highlighted the importance of digital competencies among university teachers, reinforcing the need for professional development

approaches that respond to changing academic requirements.

The framework contributes to this discussion by distinguishing between the competencies that universities seek to develop and the institutional mechanisms through which development may be supported. The five competency domains represent the intended focus of professional growth, whereas the three strategic dimensions provide the organizational basis for coordinating development activities. This distinction is important because the identification of desirable competencies does not, by itself, explain how universities can establish the conditions required for their development. The integration of the competency-based perspective, dynamic capabilities perspective, and communities of practice perspective provides a theoretical explanation for this relationship. Boyatzis (1982) offers a foundation for identifying professional competencies, Teece (2007) explains the strategic renewal of organizational capabilities, and Wenger (1998) highlights the social processes through which professional knowledge develops. Their combined contribution supports a conceptual interpretation of academic competency development as an institutional process involving individual capabilities, strategic adaptation, and collective learning.

A central implication of this synthesis is that competency development should be connected to university strategy without reducing academic work to narrowly define performance requirements. Academic responsibilities involve professional judgment, disciplinary diversity, scholarly inquiry, and collaboration. Consequently, strategic coordination should provide a coherent institutional direction while allowing flexibility in how academic staff develop and apply their capabilities.

The framework also highlights the complementary roles of formal and collaborative professional learning. Competency-based training can address identified development needs through structured activities, whereas academic learning communities provide opportunities for peer interaction, shared reflection, and knowledge exchange. Research on educational technology professional development in higher education has demonstrated the diversity of faculty engagement in professional learning, supporting the need to consider different approaches to academic development (Lidolf & Pasco, 2020).

The proposed relationships are not intended to imply that the three strategic dimensions operate identically across universities. Institutional missions, disciplinary structures, governance arrangements, available resources, and professional cultures may influence their implementation. The framework should therefore be interpreted as an adaptable conceptual structure rather than a universally prescribed administrative model.

8.2. Theoretical Contributions

The principal theoretical contribution of this paper lies in bringing together three perspectives that address different aspects of academic competency development. The competency-based perspective focuses on professional capabilities, the dynamic capabilities perspective addresses institutional adaptation, and the communities of practice perspective explains collaborative learning. Their integration provides a broader explanation of academic development than any one perspective offers independently.

A second contribution is the distinction between competency domains and strategic development dimensions. The framework separates the professional capabilities required of academic staff from the organizational mechanisms proposed to support their development. This distinction clarifies the relationship between development objectives and institutional arrangements.

Third, the framework extends the discussion of academic competency development from an individual professional development concern to an institutional strategic management concern. The incorporation of strategic orientation, coordinated development mechanisms, and continuous review provides a conceptual basis for examining how universities may align academic development with their long-term priorities.

Finally, the framework identifies relationships that can guide future empirical research. The proposed integration of organizational support, structured training, and collaborative learning offers a basis for developing research questions and examining the suitability of the framework in different higher education contexts.

These contributions are conceptual rather than empirical. Their value lies in theoretical integration and the

formulation of relationships that remain open to further examination.

8.3. Practical Implications for University Administration

The proposed framework offers several practical directions for university leaders, academic development units, and institutional planning bodies.

First, universities may benefit from incorporating academic competency development into strategic planning. This requires identifying priority competencies in relation to institutional objectives and reviewing them as academic requirements evolve. Professional development should therefore be considered during planning and resource allocation rather than treated exclusively as an operational training responsibility.

Second, academic development policies should address the organizational conditions that enable professional growth. Supportive leadership, access to relevant resources, appropriate digital infrastructure, opportunities for participation, and institutional recognition of professional learning are important considerations when designing development initiatives.

Third, competency-based training should be informed by the diversity of academic roles and development needs. Universities may use competency mapping and needs assessment to guide programme design while providing opportunities for academic staff to apply acquired capabilities in teaching, research, and other professional responsibilities.

Fourth, universities should consider establishing and supporting academic learning communities. Peer mentoring, collaborative inquiry, interdisciplinary networks, and shared professional development activities can complement formal training and provide opportunities for sustained knowledge exchange.

Fifth, institutional review should extend beyond recording participation in training activities. Universities may examine the relevance of development provisions, the opportunities available for applying acquired competencies, and the organizational conditions that support or constrain professional learning.

These directions are proposed applications of the conceptual framework. They should be adapted to institutional circumstances and evaluated before claims are made concerning their effectiveness.

8.4. Proposed Institutional Action Matrix

To translate the framework into practical institutional directions, Table 1 summarizes the principal areas of action, suggested implementation mechanisms, and possible indicators for reviewing progress. These indicators are proposed for future application and should not be interpreted as measures already tested or validated in the present study.

Table 1. Proposed Institutional Action Matrix for Strategic Academic Competency Development

Strategic area	Proposed institutional actions	Illustrative review indicators
Strategic orientation	Align competency priorities with university strategy and academic roles.	Documented priorities; periodic review of competency needs.
Enabling university environment	Provide supportive policies, leadership, resources, and opportunities for participation.	Resource accessibility; academic staff feedback; availability of development support.
Competency-based training	Conduct needs assessments and design targeted professional development activities.	Alignment between identified needs and training provision; opportunities for practical application.

Academic learning communities	Support mentoring, peer learning, collaborative inquiry, and interdisciplinary exchange.	Participation in collaborative activities; continuity of professional interaction.
Strategic review and renewal	Review implementation, gather feedback, and reconsider development priorities.	Documented review processes; adjustments informed by emerging needs.

Note. Author-developed practical matrix based on the proposed conceptual framework. The suggested indicators have not undergone empirical validation.

The matrix is intended to assist institutional planning rather than prescribe a uniform evaluation system. Universities may adapt their proposed actions and indicators according to their missions, governance arrangements, available resources, and academic development priorities.

8.5. Limitations of the Conceptual Framework

The present paper has several limitations that should be considered when interpreting its contribution.

First, the framework is developed through conceptual analysis and theoretical integration. It has not been tested through surveys, interviews, institutional case studies, or experimental research. Consequently, the proposed relationships cannot be interpreted as empirically demonstrated effects.

Second, the three strategic dimensions represent an analytical synthesis informed by the selected theoretical perspectives. Other institutional factors may also influence academic competency development, and their omission from the present framework does not imply that they are unimportant.

Third, the proposed framework does not establish a universal competency profile applicable to every university or academic discipline. Professional requirements may differ according to institutional mission, academic specialization, career stage, and organizational context.

Fourth, the implementation stages and review indicators are proposed in practical directions. Their feasibility, relevance, and effectiveness require investigation before they can be adopted as validated institutional procedures.

Finally, the framework is developed on the basis of literature published up to December 2022. Its interpretation should therefore be revisited in light of subsequent developments in higher education and academic professional practice.

These limitations establish the need for future research examining the framework across different institutional settings.

9. Conclusion and Future Research

9.1. Conclusion

This paper developed an integrated conceptual framework for the strategic management of academic competency development in knowledge-based universities. Drawing on the competency-based perspective, dynamic capabilities perspective, and communities of practice perspective, the framework connects academic development with institutional strategy, organizational support, structured professional learning, and collaborative knowledge exchange.

The proposed framework is organized around three complementary strategic dimensions: an enabling university environment, competency-based training, and academic learning communities. These dimensions are intended to support the development of five interconnected domains of academic competencies: teaching and

pedagogical competencies, research and knowledge-production competencies, digital competencies, collaborative and communication competencies, and academic leadership and professional development competencies.

The paper's principal contribution lies in distinguishing the professional capabilities that universities seek to develop from the institutional mechanisms through which such development may be organized. By integrating strategic orientation, institutional development mechanisms, competency domains, and continuous review, the framework provides a coherent basis for understanding academic competency development as an ongoing strategic management process.

The proposed framework also offers practical directions for university administration, including competency mapping, supportive institutional arrangements, targeted professional development, collaborative learning opportunities, and periodic strategic review. These directions are intended to inform institutional planning while remaining adaptable to different university contexts. As a conceptual contribution, the framework does not establish causal relationships or demonstrate improvements in academic or institutional performance. Its value lies in providing an integrated theoretical explanation and a structured basis for future investigations and institutional applications.

9.2. Future Research

Future research should examine the proposed framework through empirical studies involving academic staff, university leaders, and institutional development units. Such studies could investigate the relevance and applicability of the three strategic dimensions across different higher education contexts.

Qualitative research may explore how academic staff experience organizational support, competency-based training, and participation in academic learning communities. Institutional case studies could also examine how universities coordinate these dimensions within their strategic planning and professional development arrangements.

Quantitative studies may develop and assess appropriate measures for the proposed constructs and examine the relationships among institutional support, professional development mechanisms, and academic competency development. Any such measurement instrument would require appropriate validity and reliability assessment before use.

Comparative research across universities, disciplines, and national higher education systems could investigate how institutional missions, governance arrangements, and resource conditions influence the application of the framework.

Longitudinal studies may also examine how competency priorities and institutional development practices evolve over time, particularly in response to technological change and emerging academic responsibilities.

Finally, future research could investigate the proposed implementation stages and review indicators to determine their practical relevance and identify adjustments needed for different institutional settings.

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