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A Conceptual Framework for Artificial Intelligence Readiness in Management Education

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ABSTRACT

Artificial Intelligence (AI) is increasingly transforming educational and professional environments, highlighting the importance of individual readiness for responsible technology adoption. This study examines individual AI readiness in management education through a literature-based conceptual review of the Artificial Intelligence Readiness Scale (AIRS). The analysis focuses on four dimensions: self-efficacy and cognition, optimism, collaborative learning and working, and comfort. By synthesizing relevant literature, this study develops a conceptual framework connecting these dimensions with educational competencies, contextual learning indicators, and strategies for AI readiness development. The findings suggest that AI readiness extends beyond technical proficiency by incorporating cognitive, attitudinal, collaborative, and psychological factors. The proposed framework highlights the relevance of AI literacy, analytical reasoning, collaborative problem-solving, and psychological comfort in AI-supported management education. Furthermore, the conceptual evaluation identifies potential strengths and limitations of AIRS, particularly in distinguishing perceived readiness from demonstrated competence and actual AI adoption. These findings provide practical considerations for educational institutions seeking to design targeted training programs and responsible AI integration strategies. As the proposed framework has not been empirically validated, further research is required to evaluate its applicability and effectiveness among students, lecturers, and management professionals.

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1. INTRODUCTION

Artificial Intelligence (AI) has become an integral component of digital transformation across various sectors, including education, business, healthcare, finance, and public services [1, 2]. The increasing adoption of chatbots, recommendation systems, automated data analysis, virtual assistants, and AI-supported learning platforms demonstrates the growing integration of intelligent technologies into everyday activities. Recent studies highlight the expanding applications of AI in higher education, particularly in educational assessment, student support, and personalized learning [3, 4]. Nevertheless, successful AI adoption depends not only on technological availability but also on individuals' ability to understand, evaluate, and use AI responsibly. Therefore, examining individual AI readiness is increasingly important in educational and professional environments [5].

Although AI offers substantial benefits, individuals differ in their preparedness to adopt and use AI-based technologies. Some recognize its potential to improve efficiency, support analytical tasks, and facilitate decision-making, whereas others experience uncertainty, anxiety, or limited confidence when interacting with intelligent systems. In management education, these differences are particularly important because students and lecturers are expected to develop analytical, technological, and decision-making competencies relevant to evolving organizational environments [6]. Effective engagement with AI requires not only technical proficiency but also cognitive understanding, critical evaluation, collaborative capabilities, and psychological comfort. These factors are essential for AI-supported business analysis, strategic planning, collaborative problem-solving, and responsible professional decision-making.

The Artificial Intelligence Readiness Scale (AIRS) provides an established multidimensional framework for examining individual preparedness to engage with AI technologies. The original AIRS development and validation study by Wang et al. [7] produced a 13-item instrument, validated with data from 174 respondents across different industries, comprising four dimensions: self-efficacy and cognition, optimism, collaborative learning and working, and comfort. Although the original research established the instrument's measurement structure within management education, further conceptual examination is needed to translate these dimensions into educational competencies, contextual learning indicators, and practical development strategies. In particular, existing measurement dimensions do not automatically establish how perceived AI readiness translates into demonstrated AI competence or actual AI adoption. This creates an opportunity to examine the educational applications, conceptual strengths, and limitations of AIRS beyond its original psychometric validation.

To address this gap, the present study develops a conceptual synthesis connecting the four AIRS dimensions with management-related learning competencies and responsible AI adoption practices. Rather than reproducing the original instrument or conducting new empirical validation, the study maps readiness dimensions to educational competencies, proposes contextual indicators for AI-supported learning, evaluates the framework's strengths and limitations, and identifies strategies for readiness development. These proposed applications emphasize AI literacy, analytical reasoning, collaborative learning, and psychological preparedness. The study therefore contributes an application-oriented interpretation of AIRS while recognizing that the proposed indicators and strategies require further empirical evaluation.

Recent developments in AI-supported higher education further reinforce the relevance of this conceptual approach. Crompton and Burke [3] highlighted the expanding applications of AI in educational assessment, personalized learning, and student support, while Bond et al. [4] emphasized ethical considerations, collaboration, and methodological rigor in AI-supported education. Research on digital leadership also provides a broader organizational perspective on the importance of developing competencies for technological transformation [8]. Accordingly, this study aims to integrate competency mapping, contextual learning indicators, conceptual framework evaluation, and readiness development strategies into a coherent perspective for management education. The resulting synthesis offers a foundation for future research examining AI readiness, actual AI adoption, and educational outcomes among students, lecturers, and management professionals.

2. LITERATURE REVIEW

2.1. Technology Readiness

Technology readiness refers to an individual's predisposition to accept, understand, and utilize emerging technologies [9]. It encompasses technological competencies, attitudes, perceptions, and beliefs that influence individuals' preparedness for digital transformation. Optimism and innovativeness may facilitate technology adoption, whereas discomfort and insecurity can create psychological barriers. These characteristics provide a theoretical foundation for understanding differences in individuals' willingness and ability to engage with emerging technologies.

However, AI readiness involves additional cognitive and psychological considerations because intelligent systems can generate information, provide recommendations, and support decision-making. Kasneci et al. [10] emphasized the importance of critical thinking, appropriate competencies, and awareness of AI limitations in educational environments. Similarly, differences in students' attitudes and perceptions toward AI have been examined in higher education [11]. Consequently, AI readiness extends beyond general technology acceptance by incorporating cognitive understanding, collaborative capabilities, and psychological comfort, particularly in educational settings that require analytical reasoning and responsible decision-making.

2.2. Artificial Intelligence Readiness

AI readiness refers to an individual's preparedness to understand, accept, and effectively engage with AI-based technologies. It encompasses cognitive, attitudinal, collaborative, and psychological characteristics associated with intelligent systems. Previous research has examined organizational preparedness for AI implementation [12], while studies of technological innovation have explored broader organizational and performance-related outcomes [13]. These perspectives provide contextual background for examining readiness, although organizational innovation and individual AI readiness represent distinct constructs.

The Artificial Intelligence Readiness Scale (AIRS) [7] conceptualizes individual AI readiness through four dimensions: self-efficacy and cognition, optimism, collaborative learning and working, and comfort. The scale extends the logic of the Technology Readiness Index to AI-specific preparedness in management education. Research on AI readiness in higher education provides additional contextual perspectives [14], while studies of AI-based technology adoption highlight the relevance of individuals' intentions and perceptions [15]. Technology adoption has also been examined in specialized professional settings [16]. Building on these perspectives, the present study focuses on mapping AIRS dimensions to educational competencies, proposed learning indicators, and readiness development strategies within management education, without claiming additional empirical validation.

2.3. Artificial Intelligence Anxiety

AI anxiety represents a psychological barrier that may influence individuals' willingness to adopt and interact with intelligent technologies. It encompasses uncertainty, apprehension, and discomfort associated with AI use, potentially arising from limited technological understanding, perceived loss of control, job displacement concerns, or insufficient trust in automated systems. Previous literature has examined AI adoption in educational environments [17], while research on digital innovation has addressed broader issues of technology integration and organizational transformation [18]. These perspectives provide background for considering psychological preparedness, although digital innovation should not be interpreted as direct evidence of AI anxiety.

Within the AIRS framework, psychological concerns are particularly relevant to the comfort dimension and aspects of self-efficacy and cognition. Individuals experiencing limited confidence or discomfort when using AI may benefit from structured guidance, practical experience, and institutional support. In management education, these interventions may include AI literacy activities, supervised learning, and critical discussions of AI-generated information. Recent research on AI adoption in business education further emphasizes the importance of examining readiness and perceptions during pedagogical transformation [19]. Nevertheless, relationships between AI anxiety, perceived readiness, and actual adoption require empirical investigation rather than assumptions of causality.

2.4. Self-Efficacy and Collaborative Learning

Self-efficacy refers to an individual's belief in their ability to perform specific tasks successfully. In AI-supported environments, it reflects confidence in learning, understanding, and using intelligent technologies. Within AIRS, self-efficacy and cognition represent perceived capability and cognitive preparedness, which may influence individuals' willingness to evaluate AI-generated information and engage in unfamiliar technological activities. In management education, these characteristics are relevant to business analysis, analytical reasoning, and AI-assisted decision-making, where human judgment remains essential.

Collaborative learning and working represents another important dimension of AI readiness. Intelligent technologies can support information retrieval, idea generation, data analysis, and collaborative problem-solving. Belkina et al. [20] highlighted the importance of integrating generative AI into appropriate educational practices. Research on strategic digital transformation also provides a broader organizational perspective on technology-enabled business activities [21]. Building on these perspectives, AI-supported collaborative learning in management education may involve group projects, business case analysis, and critical evaluation of automated recommendations. These applications provide a conceptual foundation for developing context-specific learning indicators and educational strategies that support responsible AI adoption.

3. METHODOLOGY

This study adopts a literature-based conceptual review approach to examine individual Artificial Intelligence (AI) readiness within management education. The analysis focuses on four dimensions of the Artificial

Intelligence Readiness Scale (AIRS): self-efficacy and cognition, optimism, collaborative learning and working, and comfort. These dimensions provide a multidimensional perspective on individuals' preparedness to interact with AI technologies. Existing research on AI-related beliefs, anxiety, and change readiness offers relevant conceptual perspectives for understanding individual preparedness for technology adoption [22]. Rather than developing a new instrument or testing statistical relationships, the present study emphasizes conceptual interpretation and theoretical synthesis to explore the relevance of AI readiness to educational competencies, collaborative learning, and responsible technology integration.

The literature examined addresses technology readiness, AI adoption, psychological barriers, self-efficacy, and AI-supported educational practices. The original AIRS development and validation study [7] served as the anchor source defining the four dimensions. Supporting literature was identified through keyword searches in Google Scholar, ScienceDirect, SpringerLink, and IEEE Xplore using combinations of the terms "AI readiness", "technology readiness", "AI adoption", "AI anxiety", "self-efficacy", "higher education", and "management education", complemented by backward citation tracking of relevant studies. Studies were selected for the evidence synthesis matrix when they met four criteria: (a) published between 2023 and 2026 as a peer-reviewed journal article, conference paper, or scholarly book chapter in English; (b) examined individual-level AI attitudes, intentions, readiness, beliefs, or anxiety, or the implementation of AI in higher or management education; (c) reported conceptual or empirical content that could be related to at least one AIRS dimension; and (d) provided sufficient methodological information to identify the study's focus and principal findings. Studies addressing organizational performance, technopreneurship, or digital transformation without an individual AI readiness component were excluded from the matrix and used only as contextual background. Recent research on AI applications in higher education provides a foundation for understanding developments in AI-supported learning and educational transformation [3, 4]. Additional studies discussing the opportunities, challenges, and pedagogical implementation of AI further inform the conceptual analysis [10, 20]. The review adopts a conceptual synthesis approach rather than a systematic literature review and therefore does not claim exhaustive database coverage or formal meta-analytical procedures.

The conceptual analysis is organized into three interconnected stages. First, the four AIRS dimensions are examined to identify their cognitive, attitudinal, collaborative, and psychological characteristics. To support this analysis, seven studies meeting the selection criteria were synthesized in three steps: (1) extracting each study's research focus, context, and principal findings; (2) coding these findings against the AIRS dimension or dimensions they most directly address; and (3) classifying each study as reflecting individual preparedness, institutional conditions, or educational integration, and recording whether its findings support or constrain the proposed framework. The resulting evidence synthesis matrix (Table 2) informs the subsequent stages. Literature addressing technology-centered innovation and human well-being provides broader contextual considerations for this interpretation [23]. Second, the dimensions are mapped to educational competencies and proposed learning indicators associated with AI-supported analytical activities, collaborative problem-solving, and decision-making. Research on AI adoption in management and higher education provides additional context for this stage [24]. Third, the conceptual strengths and limitations of the framework are evaluated to formulate potential strategies for AI readiness development. Studies examining AI adoption intentions and digital campus transformation offer complementary perspectives on educational technology integration [25, 26].

The findings are presented through six interconnected components: the dimensions of AI readiness, an evidence synthesis of relevant literature, a proposed competency framework for management education, contextual indicators of AI readiness, a conceptual evaluation of the framework's strengths and limitations, and proposed strategies for implementation and evaluation. Related research on educational information systems and AI adoption in educational management provides additional institutional context [27, 28]. The resulting frameworks and tables represent literature-informed conceptual propositions rather than new empirical findings or validated measurement instruments. No primary data collection, independent psychometric validation, or statistical hypothesis testing was conducted. Consequently, the proposed applications require future empirical investigation to assess their validity, applicability, and potential contributions to AI adoption and educational outcomes.

4. RESULTS AND DISCUSSION

4.1. Dimensions of Artificial Intelligence Readiness

The conceptual analysis identifies four dimensions of individual AI readiness based on the existing Artificial Intelligence Readiness Scale (AIRS): self-efficacy and cognition, optimism, collaborative learning

and working, and comfort. These dimensions represent complementary aspects of individuals' preparedness to engage with AI technologies. While self-efficacy and cognition address perceived capability and understanding, optimism reflects positive expectations regarding AI benefits. Collaborative learning and working emphasizes the integration of AI into learning and professional activities, whereas comfort concerns individuals' psychological responses when interacting with AI systems. Table 1 summarizes these dimensions based on the original AIRS framework [7].

Table 1. Key Dimensions of Artificial Intelligence Readiness (adapted from Wang et al. [7])

Dimensions	**Explanation**
Self-efficacy and cognition	Reflects individuals' confidence in learning, understanding, and using AI technologies.
Optimism	Represents positive expectations regarding the potential benefits of AI for efficiency and task performance.
Collaborative learning and working	Describes individuals' perceived ability to integrate AI into learning, collaborative activities, and work processes.
Comfort	Reflects individuals' psychological comfort when interacting with AI systems and responding to technological challenges.

Table 1 establishes the multidimensional foundation for examining AI readiness beyond technical proficiency. Its central implication is that preparedness for AI adoption cannot be inferred solely from individuals' familiarity with digital tools. In management education, this distinction is important because successful engagement with AI requires the ability to evaluate automated recommendations, exercise independent judgment, and respond appropriately to technological uncertainty.

This conceptual interpretation is consistent with research emphasizing critical thinking, pedagogical integration, and responsible AI implementation [10, 4, 20]. Consequently, the framework provides a basis for examining readiness-related educational requirements, although its relationship with actual AI adoption remains subject to empirical investigation.

4.2. Evidence Synthesis of AI Readiness Research

To strengthen the conceptual foundation of the proposed framework, selected studies were mapped according to their research focus and potential relevance to the four dimensions of AI readiness. Table 2 summarizes this literature-informed mapping. The synthesis distinguishes the broader themes discussed in previous research from their proposed conceptual relevance to management education.

Table 2 reveals three complementary perspectives within the selected literature: individual preparedness, institutional conditions, and educational integration. Studies on attitudes, beliefs, and readiness [1, 9, 11, 22] support the attitudinal and psychological dimensions of the framework, while studies on educational implementation [10, 20] support the emphasis on critical evaluation and guided collaborative use. At the same time, the evidence also constrains the framework: several studies measure intentions or perceptions rather than observed behavior, one focuses on institutional rather than individual readiness [2], and another draws on professionals outside education [22]. These perspectives are related but should not be treated as interchangeable explanations of AI adoption.

The synthesis indicates that the proposed framework should distinguish individual readiness from institutional capacity and observable AI use. This distinction informs the subsequent competency mapping and helps prevent conceptual overlap between psychological preparedness, educational requirements, and implementation outcomes. However, the identified relationships remain interpretive and do not establish empirical effects between the AIRS dimensions.

4.3. AI Readiness Requirements in Management Education

The application of the AIRS framework in management education requires consideration of the competencies and learning activities associated with AI-supported educational environments. Unlike the original AIRS validation study, which examined respondents' general perceptions of AI readiness, the present conceptual analysis focuses on the potential relevance of readiness dimensions to management-related learning and professional development.

Table 2. Evidence Synthesis Supporting the Proposed AI Readiness Framework

Study	Focus and Key Finding	Related AIRS Dimension	Support for / Limitation to the Framework
Musawa et al. [1]	Examined attitudes and readiness as antecedents of intention to adopt AI in education	Optimism; self-efficacy and cognition	Supports linking positive attitudes with willingness to engage; intention is not equivalent to actual use
Mustapha et al. [2]	Examined management readiness for AI adoption in educational institutions	Contextual condition for all dimensions	Supports the need for institutional support; addresses organizational rather than individual readiness
Testa et al. [9]	Showed that AI literacy alone is insufficient; AI readiness relates to career adaptability among business and management students	Self-efficacy and cognition	Supports treating readiness as broader than technical literacy; evidence is correlational and from a single context
Almaraz-Lopez et al. [11]	Compared AI attitudes and perceptions of business administration and education students, reporting differences between study programmes	Optimism; comfort	Supports context-specific readiness development; perceptions may change as AI tools evolve
Kasneci et al. [10]	Identified educational opportunities of large language models alongside risks such as bias and over-reliance, emphasizing critical thinking competencies	Self-efficacy and cognition	Supports critical evaluation of AI output as a core competency; a position paper rather than empirical evidence
Suseno et al. [22]	Linked AI-related beliefs with AI anxiety and change readiness among HR managers, moderated by high-performance work systems	Optimism; comfort	Supports the role of beliefs and anxiety in readiness; sample consists of professionals, not students
Belkina et al. [20]	Systematically reviewed case studies of generative AI implementation in higher education, noting benefits and integration challenges	Collaborative learning and working	Supports structured, guided integration; case studies vary in rigor and outcome measurement

As presented in Table 3, the four AIRS dimensions can be conceptually mapped to educational competencies and corresponding institutional support strategies. This mapping represents a proposed contextual interpretation rather than an empirically validated extension of the original instrument.

Table 3. Proposed AI Readiness Framework for Management Education

AIRS Dimension	Educational Competency	Support Strategy
Self-efficacy and cognition	AI literacy and analytical reasoning	Guided AI training and case analysis
Optimism	Awareness of AI benefits and limitations	Practical demonstrations and reflection
Collaborative learning and working	AI-assisted teamwork and problem-solving	Collaborative projects and group assignments
Comfort	Confidence in responsible AI interaction	Supervised practice and user support

Table 3 translates the conceptual framework into competency requirements for management education. The proposed mapping distinguishes analytical literacy, informed evaluation of AI benefits, collaborative problem-solving, and responsible interaction as complementary areas of educational preparation. These competencies may assist curriculum designers in identifying learning priorities and aligning instructional activities with specific readiness-related needs. However, the mapping represents a conceptual proposal rather than a validated competency assessment model.

4.4. Conceptual Application of AIRS in Management Education

The application of the Artificial Intelligence Readiness Scale (AIRS) in management education requires consideration of how individual readiness may be reflected in educational activities. Building on the four established AIRS dimensions, this study proposes a contextual interpretation linking individual AI readiness with observable learning practices. Unlike the original instrument, which measures perceived readiness through standardized items, the proposed indicators illustrate potential applications of AI readiness in management-related learning environments. These indicators are conceptual examples rather than newly validated measurement items.

Table 4. Proposed Indicators of AI Readiness in Management Education

AIRS Dimension	Proposed Indicator	Educational Application
Self-efficacy and cognition	Ability to understand and critically evaluate AI-generated information	Interpreting AI-supported business analyses and reports
Optimism	Willingness to explore the potential benefits of AI-based applications	Exploring AI tools for business planning and market analysis
Collaborative learning and working	Ability to incorporate AI assistance into collaborative problem-solving	Using AI during group projects and business case discussions
Comfort	Willingness to interact with AI systems despite unfamiliar features or technical challenges	Practicing AI-supported decision-making in supervised learning activities

Table 4 illustrates how the proposed competencies may be translated into observable educational activities. Its principal contribution is to distinguish abstract readiness characteristics from potential evidence of engagement with AI-supported tasks. For example, critical evaluation of AI-generated business analyses and participation in AI-assisted group discussions may provide opportunities to examine applied competencies. Nevertheless, these activities are illustrative rather than validated assessment indicators, and their measurement properties require further investigation [10, 4, 20].

4.5. Conceptual Evaluation of the AIRS Framework

The Artificial Intelligence Readiness Scale (AIRS) provides a multidimensional approach to understanding individual preparedness for AI adoption. Its four dimensions integrate cognitive, attitudinal, collaborative, and psychological considerations, offering a broader perspective than assessments focused exclusively on technical competence. Although the original AIRS development study reported psychometric validation [7], the present review does not independently assess the instrument's reliability or validity. Instead, it evaluates the conceptual relevance of the framework to management education.

Table 5. Conceptual Strengths and Limitations of AIRS in Management Education

Evaluation Aspect	Conceptual Strength	Potential Limitation
Multidimensionality	Integrates cognitive, attitudinal, collaborative, and psychological factors	Does not independently establish actual AI adoption behavior
Educational relevance	Provides a framework for understanding AI-related learning preparedness	Requires further examination in management education populations
Practical applicability	May inform AI literacy programs and readiness-related support	Readiness scores alone cannot establish educational effectiveness
Contextual adaptability	Offers dimensions relevant to different learning and professional activities	Context-specific applications require further empirical evaluation

Table 5 identifies a central conceptual limitation of the AIRS framework: perceived readiness does not necessarily indicate demonstrated competence or actual AI adoption. Although its multidimensional structure offers a useful basis for understanding individual preparedness, its practical application requires consideration of contextual factors, institutional resources, and the specific demands of management-related learning activities.

This distinction has important implications for framework evaluation. Readiness assessments may help identify areas requiring educational support, but they cannot independently establish whether interventions improve learning performance or responsible AI use. Future empirical research should therefore evaluate construct validity, contextual applicability, and predictive relationships with observable educational outcomes before the framework is adopted as a formal assessment instrument.

4.6. Strategic Implications for AI Readiness Development in Management Education

The conceptual synthesis highlights the importance of translating individual AI readiness into structured educational interventions. While the proposed competency framework identifies relevant readiness dimensions, institutional implementation requires clear responsibilities and appropriate evaluation indicators. In management education, these considerations are particularly important for integrating AI into analytical learning, collaborative activities, and decision-making while maintaining critical thinking and human oversight. Table 6 presents a proposed implementation and evaluation framework based on the four AIRS dimensions.

Table 6. Proposed Implementation and Evaluation Framework for AI Readiness

AIRS Dimension	**Implementation Activity**	**Responsible Stakeholder**	**Proposed Evaluation Indicator (Example Operationalization)**
Self-efficacy and cognition	Guided AI-based business analysis exercises	Lecturers and instructors	Analytic rubric score (e.g., four levels) for accuracy checking, source verification, and identification of errors in AI-generated analyses
Optimism	AI application demonstrations and critical reflection	Lecturers and academic facilitators	Pre–post change in Likert-scale scores on AIRS optimism items, combined with the number of AI benefits and limitations correctly identified in reflection reports
Collaborative learning and working	AI-assisted group projects and case discussions	Lecturers and student teams	Rubric-based assessment of group outputs (argument quality, documented verification of AI suggestions) complemented by peer evaluation of collaboration
Comfort	Supervised AI practice and structured technical support	Academic support teams and lecturers	Pre–post change in AIRS comfort subscale scores and in self-reported barriers, recorded alongside the frequency of technical support requests

Table 6 outlines how the four AIRS dimensions may inform the implementation and evaluation of AI readiness initiatives. The proposed indicators combine perceptions and observable learning performance, allowing institutions to examine readiness-related changes without assuming that perceived readiness directly reflects actual competence. The example operationalizations illustrate how each indicator could be measured, for instance through analytic rubrics for performance-based tasks and pre–post comparisons of AIRS subscale scores for perception-based outcomes. Nevertheless, these indicators remain conceptual proposals: rubric criteria, scoring levels, and inter-rater reliability must be defined and tested, and changes in subscale scores require appropriate research designs before the indicators are implemented as formal assessment measures.

The framework also emphasizes the importance of institutional support, responsible AI use, and continuous evaluation. Educational institutions may adapt the proposed activities to specific management courses while considering data privacy, academic integrity, and human oversight. Future studies should investigate whether these activities produce measurable improvements in AI readiness, adoption behavior, and educational outcomes.

5. MANAGERIAL IMPLICATIONS

The proposed conceptual framework provides educational administrators, curriculum designers, and lecturers with a structured basis for planning AI readiness initiatives in management education. Administrators may use the framework to identify institutional support priorities and allocate resources for AI literacy development, while curriculum designers can align learning activities with relevant analytical and collaborative competencies. Lecturers may incorporate guided AI applications into business case analysis, group assignments, and decision-making exercises while emphasizing critical evaluation and human oversight. These applications support context-specific educational planning rather than prescribing a uniform approach to AI adoption.

Implementation should be accompanied by systematic evaluation involving academic administrators, lecturers, and institutional support teams. Educational institutions may examine changes in perceived readiness, the quality of AI-supported learning outputs, and students' ability to evaluate automated recommendations responsibly. Feedback from these evaluations can inform curriculum adjustments, targeted training, and improvements in institutional support. However, because the proposed framework has not undergone empirical validation, its application should remain exploratory and should complement established assessments of digital competence, educational effectiveness, and responsible technology use.

6. CONCLUSION

This study provides a conceptual synthesis of individual Artificial Intelligence (AI) readiness within management education by examining four interconnected dimensions: self-efficacy and cognition, optimism, collaborative learning and working, and comfort. The analysis highlights that individual AI readiness extends beyond technical competence and involves cognitive understanding, positive attitudes, collaborative capabilities, and psychological preparedness. By connecting these dimensions with management-related educational competencies, the study proposes a framework for understanding how individuals may become better prepared to engage with AI-supported learning, analytical activities, and professional decision-making.

The main contribution of this study lies in developing an application-oriented conceptual perspective that integrates educational competency mapping, proposed learning indicators, critical framework evaluation, and strategies for AI readiness development. These contributions offer potential guidance for educational institutions in designing AI literacy programs, collaborative learning activities, supervised AI practice, and responsible technology integration. The proposed framework also emphasizes the importance of human judgment, critical evaluation, and institutional support when incorporating AI into management education. Accordingly, AI readiness should be considered not only as an individual characteristic but also as an important consideration in planning educational interventions and supporting AI adoption.

This study is limited by its literature-based conceptual review approach and the absence of primary empirical data. The proposed indicators, competency mappings, and educational strategies have not been independently validated or tested for effectiveness. Future research should examine the applicability of the proposed framework among management students, lecturers, and professionals through empirical surveys, comparative studies, or longitudinal research. Further investigation is also needed to assess relationships between AI readiness dimensions, actual AI adoption behavior, and educational outcomes, providing stronger evidence for the development of effective and responsible AI integration strategies.

7. DECLARATIONS

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7.2. Author Contributions

Conceptualization: AH and FP; Methodology: AH, FP, and EA; Software: AH; Validation: AH and FP; Formal Analysis: FP and EA; Investigation: FP and ZQ; Resources: EA; Data Curation: AH and ZQ; Writing Original Draft Preparation: FP and EA; Writing Review and Editing: AH, FP, and EA; Visualization: FP, EA, and ZQ; All authors (AH, FP, EA and ZQ) have read and agreed to the published version of the manuscript.

7.3. Data Availability Statement

Data sharing is not applicable to this article, as no new data were created or analyzed. This study is a literature-based conceptual review, and all sources used in the analysis are cited in the reference list.

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7.5. Declaration of Conflicting Interest

The authors declare that there are no financial or personal conflicts of interest that could have influenced the findings or conclusions presented in this study.

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