

Meta-Synthesis of Human Resource Maturity Components in Organizations

Zohreh Yazdandost¹, Narges Hasanmoradi², Nader Sheikholeslami Kandlousi³

1. PhD student, Educational Management, Islamic Azad University, North Branch, Tehran, Iran

2. Associate Professor of Educational Management, Islamic Azad University, North Branch, Tehran, Iran,

n.hasanmoradi@iau-tnb.ac.ir

3. Department of Public Administration, North Tehran Branch, Islamic Azad University, Tehran, Iran

Article Info

Article type:

Research Article

Article history:

Received 11 Jul. 2025

Received in revised form 5

Sep. 2025

Accepted 13 Oct. 2025

Published online 01 Mar. 2026

Keywords:

Human Resource Maturity,

Competency,

Social Capital,

Productivity,

Organizational Development

ABSTRACT

Objective: This study aims to conduct a meta-synthesis of the components of human resource maturity in organizations by identifying, integrating, and interpreting findings from previous research.

Methods: A qualitative research design using a meta-synthesis approach was employed. Data were collected through a systematic review of domestic and international scholarly articles published in recent years. After screening and selecting credible sources, open, axial, and selective coding procedures were applied to extract main and subcategories related to human resource maturity.

Results: Findings revealed that human resource maturity is a multidimensional construct encompassing four key domains: Competency Management, Social Capital Development, Human Resource Process Improvement and Organizational Productivity Enhancement. Each domain includes several subcomponents such as training and development, merit-based selection, employee retention, organizational learning, trust-based culture, process optimization, technology utilization, and performance improvement. The results further indicated that human resource maturity has a significant and direct impact on organizational performance, job satisfaction, employee commitment, and innovation. Facilitating factors such as senior management support, strategic HR policies, technological infrastructure, and a dynamic organizational culture play a critical role in promoting HR maturity.

Conclusions: This study provides a conceptual framework for understanding human resource maturity and can serve as a foundation for developing localized models and practical policy guidelines in human capital management. Based on the findings, it is recommended that organizations focus on developing employee competencies, strengthening social capital, and improving HR processes to advance toward higher levels of maturity and achieve sustainable competitive advantage in complex and dynamic environments.

Cite this article: Yazdandost, Z., Hasanmoradi, N. & Sheikholeslami Kandlousi, N. (2026). Meta-synthesis of human resource maturity components in organizations. *Iranian Journal of Educational Research*, 5 (1), 1-20.

. DOI: <https://doi.org/10.22034/5.1.1>



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DOI: <https://doi.org/10.22034/5.1.1>

Publisher: University of Hormozgan.

Introduction

Human resource maturity, as one of the key indicators of organizational development, reflects the degree of capability, competence, and readiness of the workforce to respond to environmental changes and achieve the strategic goals of the organization (Mirzaei Reshno et al., 2023). In recent decades, organizations have faced rapid technological transformations, global competition, and structural changes—circumstances that have made the need to enhance the level of human resource maturity more urgent than ever before (Borustani et al., 2024). Human resource maturity is not limited merely to skill levels; rather, it encompasses broader dimensions such as organizational culture, continuous learning, innovation, organizational commitment, and alignment with the overall strategy (Mashayekh & Mahdizadeh, 2022). Therefore, identifying and analyzing the components of human resource maturity can significantly assist managers and policymakers in formulating workforce development programs.

Human resource maturity refers to a stage of evolution, coherence, and integration in human resource management processes within an organization, at which HR policies and practices systematically and continuously operate toward achieving the organization's strategic objectives (Khanna & Arora, 2023). This concept is inspired by organizational maturity models and signifies a transition from a reactive, unstructured status toward predictable, stable, and optimized processes (Paulk, 2009). Human resource maturity can be viewed as the organization's ability to maximize the use of its human capital to create sustainable value and competitive advantage (Barney, 1991). In the early stages of maturity, HR activities are primarily focused on administrative and operational tasks such as personnel record keeping, payroll management, and general office processes (Tavanir, 2023). As maturity advances, the HR approach evolves toward a strategic role, emphasizing talent development, employee experience enhancement, and alignment of HR policies with broader organizational programs (Garavan et al., 2012). At this stage, HR transforms from a supportive function into a strategic and business partner for senior management (Khanna & Arora, 2023).

Key dimensions of human resource maturity include leadership and organizational governance, learning culture, performance management systems, utilization of modern technologies, and human resource data analytics capabilities (Abolhasani et al., 2020). Organizations with a high level of maturity base their workforce-related decisions on data and predictive analytics,

employing key performance indicators (KPIs) for continuous evaluation and improvement (Baker & Niederman, 2014). This data-driven approach enhances transparency, accountability, and the quality of human capital (Albrecht et al., 2020).

In addition, maturity models provide frameworks for assessing and improving HR processes, comprising multiple levels ranging from initial and unstable stages to optimized and innovative ones (Ghanbari & Moradi, 2021). These models help organizations identify their current position along the maturity path and plan actions for advancement (Mohammadi et al., 2022). Generally, human resource maturity not only leads to improved individual and organizational performance but also plays a vital role in increasing employee satisfaction, reducing turnover rates, and attracting top talent (Jafari & Ahmadi, 2021). In today's competitive world, organizations that achieve high levels of HR maturity possess superior flexibility and capability to respond to environmental changes, foster innovation, and create sustainable value (Khanna & Arora, 2023). To better explain the dimensions and levels of human resource maturity, Table 1 presents an innovative matrix that introduces key dimensions, level characteristics, assessment indicators, and suggested improvement actions. This framework enables organizations to identify their current maturity stage and design appropriate improvement programs.

The concept of human resource maturity first emerged in the 1980s, influenced by organizational maturity models—particularly the Capability Maturity Model (CMM)—within the field of human capital management (Paulk, 2009). During this period, the prevailing approach to assessing HR maturity focused primarily on formal structures and administrative procedures, with less attention to organizational behavioral and cultural factors (Snyder, 2019). Early research emphasized process standardization, performance evaluation systems, and formal employee training, aiming mainly to establish order and consistency in HR performance (Garavan et al., 2012).

In the 1990s, with the expansion of global competition and technological transformation, the approach to HR maturity evolved to include new dimensions such as organizational learning, employee empowerment, and alignment of HR strategies with overall organizational strategies (Barney, 1991). Researchers realized that formal structures alone were insufficient—human resource maturity also required fostering a culture of participation, innovation, and development of employees' soft skills (Garavan et al., 2012).

The 2000s saw the emergence of more comprehensive frameworks that elevated maturity levels from initial reactive management toward strategic management and continuous optimization (Khanna & Arora, 2023). Inspired by CMMI, these frameworks helped identify the step-by-step evolution of HR maturity and provided quantitative and qualitative indicators for assessment (Paulk, 2009). Research in this period highlighted the significance of knowledge management, utilization of advanced technologies, and development of decision-support systems for human capital enhancement (Baker & Niederman, 2014).

Since the 2010s, the advent of digital technologies, big data, and artificial intelligence has driven HR maturity toward a data-driven and predictive stage (Strohmeier, 2022). Tools such as Human Capital Analytics and People Analytics have enabled organizations to make data-based decisions, forecast future skill needs, and design intelligent career paths (Baker & Niederman, 2014). Furthermore, sustainability and social responsibility have emerged as integral components of human resource maturity (Albrecht et al., 2020).

In recent years, both international and domestic studies have shifted toward hybrid models, where behavioral, technological, structural, and strategic dimensions are assessed in an integrated manner (Borustani et al., 2024). This evolutionary trend reveals that human resource maturity is no longer merely an operational or administrative concern but a key element of competitive advantage, organizational resilience, and innovation (Khanna & Arora, 2023). Accordingly, leading organizations have begun developing customized HR maturity models tailored to their industry, culture, and structure (Jafari & Ahmadi, 2021).

From a historical perspective, various models have been introduced to measure HR maturity, primarily influenced by frameworks of organizational capability assessment, such as capability maturity or organizational competency models (Paulk, 2009). These models describe a gradual pathway—from basic to optimized levels—outlining the growth and evolution of human resources (Khanna & Arora, 2023). However, the dynamic nature of today's business environment has highlighted the need to revise these models and adapt them to current conditions like digital transformation and hybrid work (Strohmeier, 2022).

Theoretically, human resource maturity is deeply linked to domains such as knowledge management, competency development, performance management, and learning culture (Garavan et al., 2012). Mature organizations in this domain not only focus on talent attraction and retention

but also build continuous learning systems that provide opportunities for skills enhancement and creativity (Ghanbari & Moradi, 2021). This, in turn, increases productivity and strengthens organizational competitive advantage (Barney, 1991).

Studies in Iran show that many organizations—especially in the public sector—are still in the early stages of HR maturity, facing challenges such as weak performance appraisal systems, lack of cohesive training and development programs, and insufficient motivational mechanisms (Mohammadi et al., 2022). This situation underscores the need to design localized frameworks compatible with the country's cultural, structural, and economic conditions (Jafari & Ahmadi, 2021).

International research identifies several prerequisites for HR maturity, including transformational leadership, organizational learning, employee empowerment, and intelligent use of modern HR technologies (Albrecht et al., 2020). Moreover, the alignment of HR policies with organizational strategic goals and the application of data-driven analytics in decision-making are emerging trends that contribute to higher maturity levels (Strohmeier, 2022).

In the international literature, HR maturity is usually regarded as the outcome of multiple organizational and managerial factors, some of which act as “prerequisites” or “necessary conditions.” Transformational leadership—one of the most critical of these factors—not only establishes a clear vision and motivates employees but also guides organizational culture toward continuous learning and innovation (Albrecht et al., 2020). Such leaders, through understanding business complexities and facilitating gradual, purposeful changes, create the foundation for enhancing HR capabilities and competencies.

Organizational learning is another key prerequisite, recognized in HR maturity models as the engine driving the development of individual and organizational knowledge and skills. Organizations with formal and informal learning processes—such as on-the-job training, experience sharing, and continuous feedback—reach higher maturity levels more rapidly (Ghanbari & Moradi, 2021). These organizations notably improve their adaptability and innovation capacity when faced with environmental change.

Employee empowerment forms another essential dimension of HR maturity prerequisites. It involves providing necessary resources, decision-making authority, and managerial support to effectively perform tasks. Empowerment fosters a sense of ownership, intrinsic motivation, and

long-term commitment among employees toward organizational goals (Garavan et al., 2012). Consequently, this leads to greater initiative and continuous improvement in individual and group performance.

Intelligent use of modern HR technologies—such as human capital management systems, workforce analytics, and AI-based platforms—enables organizations to make data-driven decisions, automate HR processes, and enhance the employee experience (Strohmeier, 2022). This not only improves productivity but also increases transparency, accuracy, and speed in HR decision-making.

In this context, the alignment of HR policies with organizational strategic objectives holds special significance. The more HR policies, programs, and processes are aligned with the organization's vision, mission, and strategic priorities, the higher the likelihood of success in the maturity journey (Khanna & Arora, 2023). Such alignment ensures that HR actions directly serve competitive advantage and sustainable value creation for stakeholders.

Given the diversity of components discussed in the research literature, meta-synthesis emerges as a valuable research method that integrates dispersed findings and offers a comprehensive framework defining the components of human resource maturity (Sandelowski & Barroso, 2022). By combining evidence from qualitative and quantitative studies, this approach can identify existing knowledge gaps and suggest future research directions (Snyder, 2019). Accordingly, the purpose of this paper is to conduct a systematic meta-synthesis to identify and analyze key components of human resource maturity in organizations, focusing on both domestic and international literature.

Material and Methods

The present study employed a meta-synthesis approach to analyze the body of research related to the dimensions and components of human resource maturity. Meta-synthesis is a systematic and explicit method used to identify, evaluate, and interpret the findings of studies conducted by scholars and researchers. Studies appropriate for meta-synthesis must be published online and derived from empirical or field-based research. Therefore, the research domain consisted of all credible scientific articles addressing the dimensions and components of human resource maturity.

Considering the rapid development of HR maturity concepts in recent years, the selected studies also correspond to this contemporary timeframe.

To collect the required information, a researcher-designed extraction worksheet was used for reporting and documenting the initial studies. The analysis followed the seven-step framework of Lee et al. (2008).

The coefficient of reliability (C.R.) for coding agreement was calculated as:

$$\text{C.R.} = (85 + 79 + 80 + 72) / (4 \times 99) \times 100 = 74.79\%$$

$$\text{C.R.} = (\text{Number of agreed codes} / \text{Total number of codes}) \times 100$$

In accordance with the purpose of this section, the first five stages of the model are explained as follows:

Step 1: Formulating the Research Question

The initial step is to clearly define the study question. The research questions and related parameters are presented in Table 1.

Table 1. Research Questions and Parameters

Parameter	Research Question
What (Study Question)	What are the dimensions and components of human resource maturity in organizations according to previous studies?
Who (Study Population)	Articles retrieved from multiple databases including Scopus, Emerald, Sage, SID, ScienceDirect, ProQuest, SpringerLink, World Scientific, Taylor & Francis, Google Scholar, and ERIC.
What Results	Studies whose findings are directly related to identifying the dimensions and components of human resource maturity in organizations.
When (Time Limitation)	Studies published from 2018 onwards.
How (Study Retrieval Method)	Meta-synthesis was used, and studies were included or excluded based on predefined criteria.

Step 2: Establishing the Review Protocol

To minimize researcher bias, a review protocol was established prior to retrieving the literature. The researcher first determined the scope of studies and developed criteria for selecting and categorizing relevant articles (Okoli & Schabram, 2011).

a. Inclusion Criteria

Studies published on the dimensions and components of human resource maturity in organizations. Studies providing sufficient empirical data related to the research objectives, including coded findings on HR maturity components.

Peer-reviewed articles available online or in full-text printed format.

b. Exclusion Criteria

Studies lacking sufficient information related to the research objectives, particularly those focusing only on quantitative relationships with other variables.

Low-quality studies published in non-academic or non-credible venues.

Articles published before 2018.

Step 3: Literature Search

A comprehensive search was conducted to identify all relevant studies. The search covered national databases such as Google, SID, Normagas, Magiran, the Humanities Portal, IRANDOC, and Elmnet, as well as international databases such as Scopus, Emerald, Sage, SID, ScienceDirect, ProQuest, SpringerLink, WorldScientific, Taylor & Francis, Google Scholar, ERIC, and Wiley.

Two experienced researchers independently performed the search to ensure accuracy, and three subject-matter experts supervised the process. Only peer-reviewed academic articles were included to ensure high scientific validity.

Step 4: Data Extraction

A standardized extraction form was used, including the following fields:

- Source (journal name, article title, authors)
- Purpose of the study
- Methodology
- Summary of key findings

A total of 65 studies (Persian and English) were initially identified. After applying inclusion and exclusion criteria, 30 studies were selected for final analysis. Table 2 shows an example of the search strategy and screening process.

Table 2. Search Strategy and Inclusion/Exclusion Process

Database	Search Strategy	Inclusion Filters (Stage 1)	Exclusion Filters (Stage 2)	Initial Findings	Excluded	Final Included
International Databases (Scopus, Emerald, Sage, SID, ScienceDirect, ProQuest, SpringerLink, etc.)	Strategic components of transformation in physical education in schools (sample keyword structure)	Article title, abstract, keywords; 2018–present	Invalid articles, book chapters, theses, irrelevant content	75	50 (excluded due to content irrelevance)	25

Step 5: Quality Assessment

All studies must meet acceptable validity and reliability standards. In this research, a quality appraisal checklist was used to categorize studies as high, medium, or low quality. Low-quality studies were excluded.

Five sample studies were evaluated using the Carlsen et al. (2007) model. Table 3 presents the checklist applied.

Table 3. Sample Quality Assessment Checklist Based on Carlsen et al. (2007)

Criterion	Study 1	Study 2	Study 3	Study 4	Study 5
Sampling Strategy	✓	✓	✓	✓	✓
Data Collection Method	✓	–	✓	✓	✓
Data Analysis Procedure	✓	–	✓	✓	✓
Research Design Alignment	✓	✓	✓	✓	✓
Clarity of Findings	✓	✓	✓	✓	✓
Conclusion Appropriateness	–	–	✓	–	✓
Paradigm–Method Consistency	✓	–	✓	✓	✓
Overall Quality	High	Weak	High	Medium	High
Notes	Requires third reviewer judgment				

In cases of disagreement between the two evaluators, a third expert served as adjudicator.

Results

Step 5: Processing, Synthesis, and Interpretation in the Form of a Tangible Output

Based on the findings obtained from the research and considering the stated criteria, first all components and indicators were extracted through the open coding process. In this regard, Table 1, derived from research findings based on related studies, was developed in three sections: researchers, year of publication, and the indicators and components mentioned. The studies were numbered based on their publication year, which are presented below.

Table 4. Semantic Codes Identified from the Articles

No.	Researcher & Year	Research Title	Research Method	Research Findings
1	[2]	Investigating the Effect of the Maturity of HR Excellence Model 34000 Processes on Employee Performance Management in Tehran Darou Pharmaceutical Company	Survey; questionnaire; analysis using SPSS and SmartPLS	All hypotheses were confirmed; human resource maturity has a significant effect on employee performance management.
2	[3]	Investigating the Effect of Social Capital on Human Resource Retention with the Mediating Role of Managers' Competence in the Education Departments of Ilam Province	Correlational	Social capital, through managers' competence, has a positive and significant effect on human resource retention.
3	[4]	Designing an Indigenous Model of Human Resource Capability Maturity among Faculty Members Based on Grounded Theory	Qualitative; grounded theory; semi-structured interviews with 17 faculty members	An indigenous HR maturity model was designed by identifying key components.
4	[5]	Modeling Organizational Factors Affecting Human Resource Productivity with Emphasis on Social Capital Using the Learning Organization Approach in Higher Education	Mixed (qualitative and quantitative); interviews; questionnaires; confirmatory factor analysis	Social capital plays a key role in improving human resource productivity.
5	[6]	The Impact of Human Resource Maturity on Improving Human Resource Management (Payame Noor University of Lorestan Province)	Quantitative; descriptive-survey; questionnaire; SPSS analysis	A positive and significant relationship exists between HR maturity and improved HR management indicators.
6	[7]	The Role of Human Resource Sustainability in HR Maturity with a Human Capital Approach	Quantitative; survey; questionnaire; confirmatory factor analysis	Human capital in learning, job satisfaction, and commitment plays a key role in HR maturity.
7	[8]	Digital Maturity in HR Management Transformation in the Post-COVID Era: A Thematic Analysis	Thematic analysis of 190 articles (2017–2024)	Three main axes of digital HR maturity: digital transformation, innovation, and adaptive human resources.
8	[9]	Digital Maturity of Human Resource Management: Stability versus Development	Conceptual	A framework was presented to balance sustainability and development in digital maturity.
9	[10]	Transformation in Organizational and Human Resource Management in the Era of Digital Intelligence	Analytical	Six key dimensions including flexible structure, team collaboration, emerging technologies, and new performance evaluation.
10	[11]	Artificial Intelligence, Virtual Reality, Augmented Reality, and Metaverse Technologies for Human Resource Management	Survey; comparative analysis	Emerging technologies play an important role in training, retention, and employee experience.
11	[12]	Human Capital Management Practices, Employee Image, and University Social Responsibility	Descriptive; questionnaire; analysis of 400 responses	A significant relationship exists between human capital management, employee image, and social responsibility.
12	[13]	The Relationship between Strategic Human Resource Management, Green Innovation, and Environmental Performance	Structural equation modeling; data from 487 participants	Self-efficacy has a mediating role, and person–organization fit has a moderating effect.

Presentation of Findings (Cross-Study Synthesis)

At this stage, researchers present the results that emerge during the qualitative meta-synthesis process. For effective presentation of findings, different audiences should be considered. According to Lee Wright et al. (2008), researchers present their findings using visual elements such as charts, images, and tables.

Initially, in the meta-synthesis process, the characteristics, elements, and components affecting human resource maturity were extracted. In this process, all component descriptions were first identified through open coding. Then, in the product stage, since the goal is to combine all scientific findings related to a specific topic and reach a unified synthesis, a comprehensive summary was developed.

In presenting the synthesis results, the qualitative analysis of open codes was first placed together and, through re-coding, overlapping and semantically related items were merged. As a result, components (axial codes) were extracted.

Subsequently, to categorize all human resource maturity components based on shared conceptual meanings, axial coding was applied. This process led to the identification of four main dimensions (selective codes). The results of axial and selective coding are presented in Table 5.

Table 5. Dimensions and Components of Human Resource Maturity

No.	Main Category	Subcategory	Study Codes (Description)	Researcher & Year
1	Human Resource Leadership and Governance	Transformational leadership in developing HR maturity	Transformational leadership, through inspiration, creating a shared vision, and empowering employees, directly improves the level of HR maturity and institutionalizes a culture of continuous improvement.	Ulrich et al., 2020
2		Role of senior managers in strategic alignment	Senior managers facilitate HR maturity by aligning HR policies with organizational strategies and optimizing resource allocation and processes.	Bass & Riggio, 2021
3		Emotional intelligence of HR managers	Managers with high emotional intelligence manage interpersonal relationships, resolve conflicts, and motivate employees more effectively, increasing job satisfaction and HR maturity.	Goleman, 2022
4		Organizational culture for promoting maturity	A culture based on trust, transparency, and learning creates the foundation for developing HR maturity and enhancing employee capabilities.	Abbasi et al., 2021
5	Organizational Learning and Development	Organizational learning and employee capability development	Organizations implementing continuous learning systems allow employees to update their knowledge and skills, directly improving HR maturity.	Senge, 2021

6		Double-loop learning and its impact on HR maturity	Double-loop learning, involving reconsideration of organizational assumptions and frameworks, enhances adaptability to environmental changes.	Argyris & Schön, 2018
7		Competency-based training planning	Competency-based training programs develop key skills needed by organizations and facilitate HR maturity development.	Rezaei et al., 2020
8		Evaluation of training effectiveness	Regular evaluation of training programs helps identify strengths and weaknesses and improves HR development initiatives.	Noe, 2022
9	Technology and Digital Transformation in HR	Use of human capital management systems and HR information systems	Implementing integrated human capital management systems improves data integration, decision-making, and HR productivity.	Davenport et al., 2023
10		Use of artificial intelligence in workforce analytics	AI analyzes HR data to predict employee behavioral and performance trends and propose improvement solutions.	Stone et al., 2023
11		HR decision support systems	These systems analyze multidimensional data to assist managers in recruitment, training, and promotion decisions.	Karami et al., 2019
12		Automation of HR processes	Automation reduces errors, saves time, and allows managers to focus on strategic HR activities.	Parry & Strohmeier, 2019
13		Link between HR strategy and organizational goals	Aligning HR strategy with organizational goals ensures sustainable development and HR maturity growth.	Kaplan & Norton, 2019
14	Strategic Alignment of HR	Performance management aligned with strategy	Performance management systems monitor and ensure employee performance aligns with organizational strategies.	Wright & McMahan, 2020
15		Designing flexible and agile HR structures	Agile HR structures enable rapid responses to environmental changes and improve HR maturity.	Hosseini et al., 2023
16		Measuring alignment effects on competitive advantage	Effective HR–strategy alignment can create sustainable competitive advantage.	Boxall & Purcell, 2022

Explanation of Categories and Subcategories

Category 1: Human Resource Leadership and Management

Human resource leadership and management is considered one of the key pillars in the maturity of human resources. Organizational leaders play a significant role in guiding employee behavior and aligning it with the organization's strategic objectives by defining the vision, values, and human resource strategies. Leadership styles, particularly transformational and participatory leadership, contribute to improving organizational performance and enhancing the level of HR maturity by fostering motivation, trust, and innovation among employees. This dimension includes managers' ability in strategic decision-making, change management, and the creation of a learning culture within the organization.

Subcategories within this dimension include leadership competencies, performance management, employee empowerment, and the development of a positive organizational culture. Leadership competencies involve skills such as communication abilities, strategic thinking, and problem-solving capacity. Performance management refers to the continuous process of evaluating and improving employee performance. Employee empowerment strengthens employees' sense of ownership over their work by increasing their authority, responsibilities, and skills. The development of a positive organizational culture is based on values such as trust, transparency, and mutual respect.

Category 2: Human Capital Development

Human capital development focuses on the processes of growth, training, and enhancement of employees' capabilities. This category is based on the belief that human resources—particularly employees' knowledge, skills, and abilities—represent the most valuable asset of an organization. Targeted training programs, career development paths, and competency development policies are among the main tools for achieving this goal. Developing human capital not only increases productivity but also strengthens employee motivation and job satisfaction.

The subcategories in this area include training and development, knowledge management, career path planning, and succession planning. Training and development refer to the continuous improvement of employees' skills and knowledge. Knowledge management focuses on the creation, storage, and transfer of knowledge within the organization. Career path planning increases employee motivation by designing opportunities for professional advancement. Succession planning refers to identifying and preparing talented individuals to occupy key organizational positions in the future.

Category 3: Innovation and Technology in Human Resources

The integration of emerging technologies into the field of human resources has significantly transformed the ways employees are managed and developed. The use of human capital management (HCM) systems, data-driven analytics, and artificial intelligence in HR decision-making has improved the efficiency, accuracy, and speed of organizational processes. This category examines the role of technology in optimizing HR processes such as recruitment, training, performance evaluation, and employee retention.

Subcategories within this dimension include the use of HCM systems, data-driven analytics, process automation, and e-learning technologies. HCM systems help integrate HR information and processes within organizations. Data-driven analytics, supported by big data, enables predictive analysis and more intelligent decision-making. Process automation reduces errors and saves time in administrative operations. E-learning technologies make training more flexible and personalized for employees.

Category 4: Organizational Culture and Structure

Organizational culture and structure serve as the foundation for the development and functioning of human resources. Organizational culture consists of the shared values, beliefs, and behaviors among members of the organization, influencing how they interact, make decisions, and perform their tasks. Organizational structure, on the other hand, determines how tasks, responsibilities, and formal relationships are distributed, thereby shaping communication flows and coordination within the organization.

Subcategories within this category include alignment with organizational strategy, structural flexibility, change management, and organizational diversity and inclusion. Alignment with organizational strategy refers to the consistency of HR policies and practices with the broader goals of the organization. Structural flexibility enables organizations to respond quickly to environmental changes. Change management involves guiding and supporting employees throughout organizational transformation processes. Organizational diversity and inclusion aim to create an environment where individuals from different backgrounds and perspectives can contribute while feeling valued and treated equally.

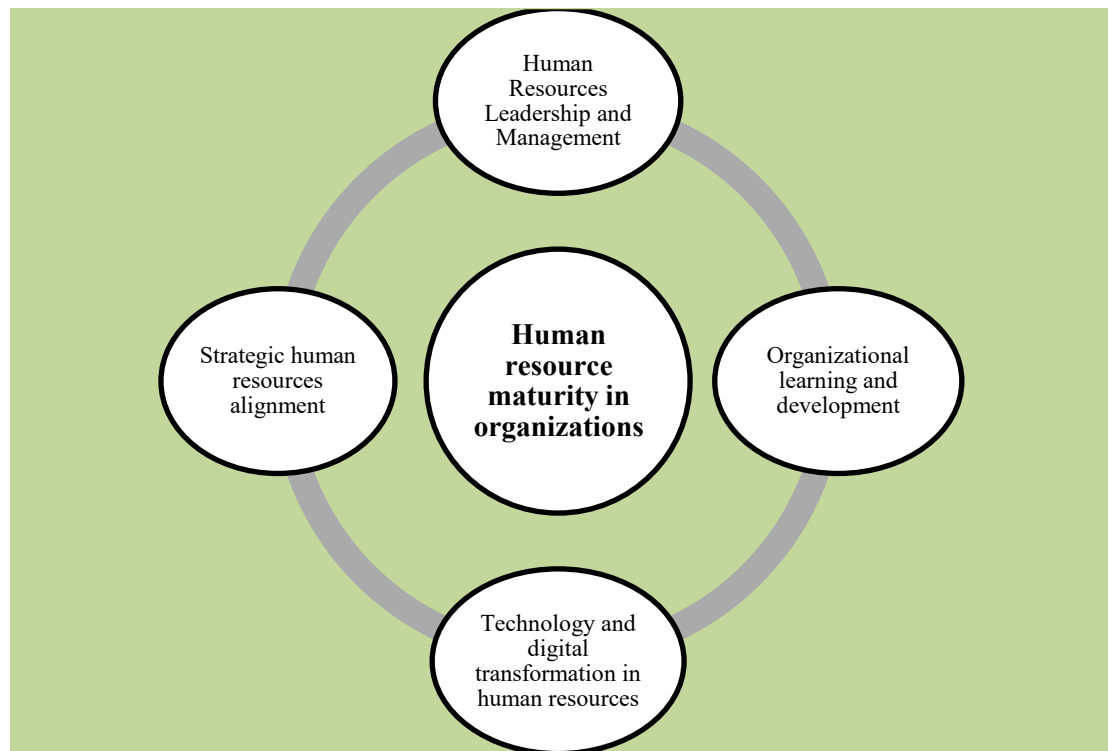


Figure 1. Conceptual research model

Discussion

The findings of this study clearly demonstrate that human resource maturity is not merely a theoretical concept, but rather a practical and dynamic framework for guiding human resource strategies in organizations. The four main categories examined—performance management, human resource retention, productivity enhancement, and human capital development—represent components of a complete cycle that operates synergistically. If one of these dimensions is not properly developed, the entire human resource maturity cycle will be disrupted. This highlights the necessity of adopting a comprehensive and systematic perspective toward human resource maturity (Mirzaei Reshno et al., 2023).

In the domain of performance management, studies indicate that maturity in this area depends on the implementation of coherent evaluation systems, the definition of key performance indicators (KPIs), and the use of analytical data to improve decision-making. This process not only enhances individual performance but also helps organizations align their strategic objectives with the capabilities of their workforce. Experiences from organizations that have adopted advanced

maturity models suggest that implementing two-way feedback and utilizing modern technologies (such as analytical dashboards) increases employee motivation and reduces operational errors (Borustani et al., 2024).

Regarding human resource retention, the importance of creating an attractive work environment, maintaining transparency in communication, and establishing effective reward systems is clearly evident. Maturity in this category reflects an organization's ability to foster long-term loyalty and commitment among employees. Research suggests that mature organizations employ diverse strategies such as career path development, targeted welfare programs, and support for work-life balance (Mashayekh & Mahdizadeh, 2022). These measures not only reduce turnover rates but also contribute to higher job satisfaction and collective productivity.

In terms of productivity enhancement, human resource maturity extends beyond merely increasing work output. It includes employee empowerment, process optimization, and the adoption of technological innovations. Previous studies show that mature organizations enhance productivity through a combination of continuous training, employee participation in decision-making, and the use of digital tools (Tavanir, 2023). This approach enables productivity to increase sustainably while maintaining the organization's competitive advantage in the market.

Human capital development is considered the backbone of human resource maturity. Skill development, talent cultivation, and support for innovation are among the key factors in this domain. Studies indicate that mature organizations employ blended learning models (both face-to-face and online), mentoring programs, and support for organizational learning (Khanna & Arora, 2023). Investment in this area not only increases workforce efficiency but also fosters a culture of learning and innovation within the organization.

From a practical perspective, it is recommended that human resource managers, inspired by the results of this study, design a comprehensive roadmap to enhance organizational maturity. This roadmap should include determining the current level of maturity, identifying weaknesses and opportunities, designing training and motivational programs, and continuously evaluating progress. Integrating these actions with the organization's overall strategy will ensure the success and sustainability of outcomes.

Research Suggestions

Future research could focus on conducting a comparative analysis of human resource maturity models in public and private organizations in order to identify similarities and differences in successful patterns of implementation. Such comparative studies may reveal structural, managerial, or cultural factors that influence the effectiveness of maturity models across different organizational contexts.

Another promising direction is to examine the relationship between performance management maturity and organizational productivity using advanced analytical techniques such as data mining and machine learning. Applying these methods could provide deeper insights into patterns and predictive relationships that traditional statistical approaches may not capture.

Further studies may also explore the role of emerging technologies—particularly artificial intelligence and predictive analytics—in enhancing human resource maturity. Investigating how these technologies support decision-making, workforce planning, and performance monitoring could provide valuable guidance for organizations seeking digital transformation in HR practices. Research is also needed to analyze the impact of human resource maturity on reducing employee turnover and increasing job satisfaction. Understanding this relationship can help organizations design retention strategies that strengthen employee commitment and improve organizational stability.

Another area worth examining is the effectiveness of blended learning models that combine face-to-face and online training in developing human capital, particularly within knowledge-based organizations. Such studies could evaluate how hybrid learning environments contribute to skill development, innovation capacity, and organizational learning.

Scholars may also investigate the relationship between human resource retention maturity and the development of an innovative organizational culture. This line of research could clarify how retention strategies contribute to knowledge sharing, creativity, and long-term innovation within organizations.

In addition, future research could assess the impact of performance-based reward systems on the maturity of human resource management in service organizations. Understanding this relationship may provide insights into how incentive structures influence employee engagement and organizational effectiveness.

Another valuable research direction would be to examine the role of human resource maturity in strengthening organizational resilience during crises, such as pandemics or economic disruptions. Such studies could help identify HR practices that enable organizations to adapt and maintain performance under uncertain conditions.

Researchers may also explore how the alignment of human resource strategies with an organization's overall strategic objectives affects the maturity of HR systems. This investigation could highlight the importance of strategic integration in achieving sustainable HR development. Finally, it would be beneficial to study the relationship between investment in human capital development and the creation of sustainable competitive advantage for organizations. Such research could provide empirical evidence on how long-term investments in employee skills and capabilities translate into strategic organizational success.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by the ethics committee of Islamic Azad University. The patients/participants provided their written informed consent to participate in this study.

Author contributions

All authors contributed to the study conception and design, material preparation, data collection, and analysis. All authors contributed to the article and approved the submitted version.

Funding

The authors did (not) receive support from any organization for the submitted work.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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