

Emotional Intelligence Revisited: Leadership Adaptation in Environments Mediated by Intelligent Technologies [†]

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[†] Presented at the 1st International Online Conference on Administrative Sciences (IOCAS 2026), 4–5 February 2026; Available online: <https://sciforum.net/event/IOCAS2026>.

Abstract

This study examines the role of emotional intelligence in leadership contexts mediated by intelligent technologies, focusing on how socio-emotional processes are shaped within digital communication environments and artificial intelligence-enabled systems. Situated at the intersection of leadership and technological transformation, the study aims to clarify the thematic structure and intellectual development of this emerging research domain. A systematic bibliometric approach is employed, drawing on data from the Scopus database for 2004–2026 and integrating descriptive analysis, keyword co-occurrence mapping, and co-citation techniques. The results suggest a rapidly expanding yet fragmented body of literature structured around three principal trajectories: leadership in virtual and distributed environments, the integration of emotional processes with intelligent systems, and competence-based approaches linked to digital transformation. Across these strands, emotional intelligence is consistently associated with communication, trust, and team effectiveness, while conditions of mediated interaction increasingly shape its role. The findings further reveal a degree of conceptual dispersion alongside the absence of a standardized vocabulary. Overall, the study concludes that emotional intelligence remains central to leadership effectiveness but is reconfigured as a context-dependent capability embedded within sociotechnical systems.

Keywords: emotional intelligence; artificial intelligence; digital leadership; technology-mediated environments; scientometrics

1. Introduction

Emotional intelligence (EI) has been widely examined as a predictor of leadership effectiveness, with a substantial body of evidence linking it to leader behavior, follower outcomes, and organizational performance [1]. Foundational models conceptualize EI as a set of emotion-related abilities that enable the accurate perception, regulation, and use of affect in decision making and social interaction [2]. In particular, the ability model developed by Salovey and Mayer defines EI as a cognitive capacity involving the decision-making, appraisal, understanding, and management of emotions, which was later refined into a framework of interrelated competencies [3]. Complementary approaches, including mixed and trait models, extend the construct to include broader socio-emotional competencies, motivations, and self-perceptions [4]. Across these perspectives, EI is often associated with leadership-relevant outcomes such as transformational leadership, interpersonal effectiveness, and follower performance [5]. However, the strength and interpretation of these



Academic Editor: Isabel-María García-Sánchez

Published: 2 July 2026

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relationships vary depending on how EI is defined and measured, and, in some models, they overlap with related constructs such as personality and self-perceptions [6].

However, the mechanisms through which EI operates have largely been theorized within contexts characterized by direct, face-to-face interaction, in which emotional cues are relatively accessible, synchronous, and embodied [7]. In such settings, leaders draw on both verbal and nonverbal signals, including facial expressions, vocal tone, and immediate feedback, to interpret and regulate affect in interpersonal exchanges [8]. As leadership increasingly unfolds in environments mediated by intelligent technologies, the foundational premises that underpin these models become less stable [9]. Digital communication channels alter the availability, richness, and timing of emotional cues, often filtering or reshaping the signals that support emotional perception [10]. Asynchronous communication reduces immediacy, while text-based interaction limits access to nonverbal expression, increasing reliance on symbolic or inferred indicators of affect [11]. In addition, algorithmic systems and AI-assisted tools introduce further layers of mediation in which emotion-related cues may be generated, modified, or interpreted by nonhuman agents [12]. These changes challenge the applicability of established EI frameworks by altering the conditions under which emotional processes occur [13].

Research on leadership in technology-mediated contexts has developed across several parallel streams, each offering partial insight into how emotional processes are shaped by digital environments [14]. Early work on e-leadership emphasizes that leadership is enacted through and shaped by information technologies, highlighting the interplay among technological affordances, organizational structures, and communication practices [15]. Communication theories further explain how mediation affects relational dynamics [16]. Media richness theory suggests that communication channels differ in their capacity to convey multiple cues and support nuanced interpretation, while social presence theory focuses on the extent to which interaction partners are perceived as psychologically present [17]. Research in computer-mediated communication shows that users adapt to constrained channels through selective self-presentation and interpretation, indicating that mediated environments do not simply reduce emotional content but transform how it is produced and understood [18]. More recent work extends these perspectives to AI-mediated communication, where intelligent systems assist in generating or modifying messages, shaping both content and perceived intent [19].

At the same time, research on algorithmic management and sociotechnical systems examines how intelligent technologies reshape authority, control, and decision-making in organizations [20]. Algorithmic systems increasingly participate in task allocation, performance evaluation, and feedback provision, often with limited transparency [21]. This suggests that leadership influence is not exercised solely through direct interpersonal interaction but may be distributed across human and technological actors [22]. Advances in affective computing and emotion recognition technologies also introduce new forms of emotionally relevant data into organizational settings, although their validity, reliability, and interpretation remain contested [23]. Together, these developments demonstrate that emotional processes in leadership are embedded in sociotechnical environments where cues may be mediated, inferred, or algorithmically produced [24].

Despite the growing importance of these developments, the literature remains fragmented across disciplines such as organizational behavior, communication studies, information systems, and computer science. Conceptualizations of EI vary across studies, ranging from ability-based models to trait- and competency-based approaches, while “intelligent technologies” refers to a diverse set of systems with different characteristics [25]. As a result, research often lacks a shared framework for integrating EI with the specific features of technology-mediated environments [26]. Empirical approaches are similarly

varied, including survey-based leadership studies, experimental communication research, qualitative analyses of algorithmic work, and technical evaluations of AI systems [27]. This diversity hinders the development of cumulative knowledge and makes it difficult to identify consistent patterns in how EI operates in digital contexts [28].

Ultimately, this study addresses these limitations through a systematic and bibliometric review of research on EI in technology-mediated leadership contexts. It seeks to consolidate the existing body of knowledge by examining how EI relates to key dimensions of leadership in digital mediation, including interpersonal influence, affective communication, and decision-making within sociotechnical environments. Drawing on systematic literature screening and bibliometric techniques, the study maps the field's intellectual structure, identifies its main thematic patterns, and traces the conceptual connections that underpin this dispersed body of work. On this basis, it develops an integrative conceptual framework that situates EI as a context-dependent capability operating across both human and technologically mediated interactions. In doing so, the study advances a more coherent understanding of EI in digitally mediated leadership and outlines directions for future research, particularly regarding measurement in mediated settings, the interaction between human and technological agents in emotional processes, and the implications for leadership effectiveness in contemporary organizations.

2. Methodology

This study adopts a systematic bibliometric research design to examine the evolution and conceptual structure of EI within leadership contexts mediated by intelligent technologies. The primary objective is to identify structural patterns in a field marked by significant conceptual dispersion across multiple disciplinary domains. To this end, bibliometric techniques are employed to trace thematic development, delineate the intellectual organization of the literature, and uncover emergent research trajectories.

Bibliographic data were retrieved exclusively from the Scopus database, which was selected based on its extensive multidisciplinary coverage, standardized indexing architecture, and consistent subject classification system, features that collectively facilitate robust and reliable cross-disciplinary analysis [29]. The search strategy was implemented across titles, abstracts, and author keywords (TITLE-ABS-KEY) using a strategically structured query that integrates three core conceptual domains: emotional intelligence and its related constructs, leadership, and intelligent or technology-mediated environments. Established terminology, alongside relevant lexical variants, was incorporated to ensure conceptual precision while preserving sufficient sensitivity to terminological diversity. Reflecting the conceptual heterogeneity and interdisciplinary nature of the field, the search query was designed to capture the diverse terminology used across these domains. Retrieved records were screened against the predefined eligibility criteria before inclusion in the final dataset. The search results were further constrained to publications indexed within the subject areas of Business, Computer Science, Psychology, and the Social Sciences. Additional inclusion criteria limited the dataset to English-language documents and specific document types, namely journal articles, conference papers, and book chapters. The bibliographic search was conducted in Scopus on 17 March 2026. Although 2026 represents an incomplete publication year, it was retained to capture the most recent developments in the field, and the corresponding findings were interpreted with due caution. The full Scopus query used is the following:

TITLE-ABS-KEY (("emotional intelligence" OR "EI" OR "emotional competenc*" OR "affective intelligence" OR "socio-emotional") AND (leadership OR leader* OR "leadership behavior" OR "leadership style*" OR "organizational leadership") AND ("artificial intelligence" OR "AI" OR "intelligent technolog*" OR "digital technolog*" OR "algorithmic

system*" OR "technology-mediated" OR "computer-mediated" OR "AI-enabled" OR "automation" OR "digital communication" OR "virtual team*" OR "human-ai interaction" OR "human-machine interaction")) AND (LIMIT-TO (SUBJAREA,"BUSI") OR LIMIT-TO (SUBJAREA,"COMP") OR LIMIT-TO (SUBJAREA,"PSYC") OR LIMIT-TO (SUBJAREA,"SOCI")) AND (LIMIT-TO (LANGUAGE,"English")) AND (LIMIT-TO (DOCTYPE,"ch") OR LIMIT-TO (DOCTYPE,"ar") OR LIMIT-TO (DOCTYPE,"cp"))).

Eligibility criteria required that all included publications explicitly address the intersection of EI, leadership, and technology-mediated or artificial intelligence-related contexts. Records that failed to meet the predefined topical scope, subject area limitations, language requirements, or document type specifications were systematically excluded. Duplicate entries were identified and removed to ensure dataset integrity. The remaining records were subsequently screened based on their titles, abstracts, and author keywords to verify their relevance to the study objectives. Publications in which the core concepts of emotional intelligence, leadership, and technology-mediated environments were not substantively addressed were excluded from the final dataset. The screening and selection process was conducted in a structured and transparent manner in accordance with PRISMA 2020 reporting standards [30], thereby enhancing methodological rigor, transparency, and reproducibility, an approach widely endorsed in academic research design frameworks (see Figure 1).

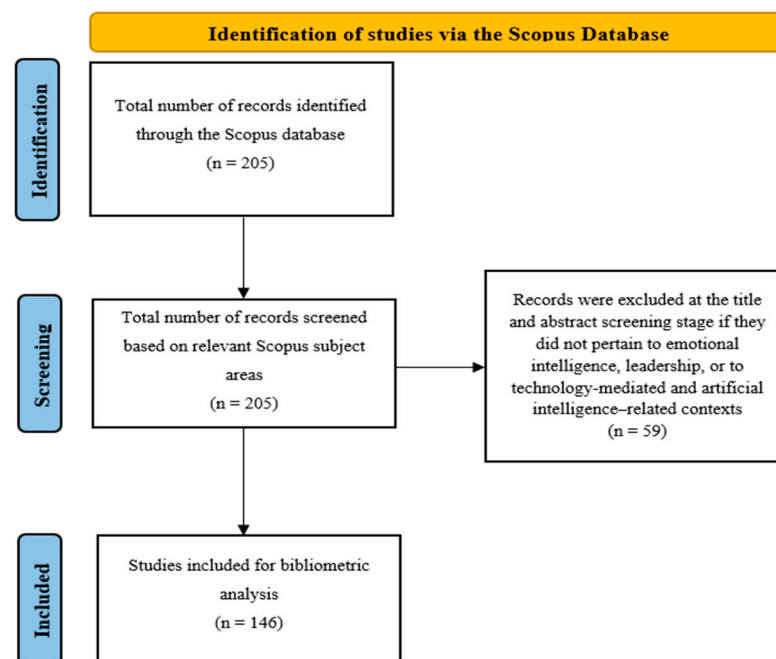


Figure 1. PRISMA 2020 flow diagram of the selection process.

Bibliometric analysis was conducted using the R (4.0) statistical environment and the bib-liometrix package (5.0) [31]. The analytical framework integrates both descriptive and relational techniques. Descriptive indicators were employed to assess publication output, citation dynamics, and authorship patterns, thereby providing a comprehensive overview of the field's developmental trajectory. In parallel, relational analyses focused on keyword co-occurrence networks to identify dominant thematic clusters and emerging research directions, and on co-citation analysis to examine the intellectual structure and influential contributions shaping the domain. Network construction and visualization adhered to established bibliometric procedures as implemented within the Bibliometrix environment [32]. Collectively, this methodological approach enables a systematic, transparent, and reproducible mapping of the scholarly landscape. It therefore facilitates the

identification of thematic concentrations, conceptual interrelationships, and developmental patterns in the study of EI within technology-mediated leadership contexts, contributing to a more coherent understanding of a fragmented and evolving field.

3. Results

As seen in Table 1, the dataset comprises 146 publications produced between 2004 and 2026 and distributed across 126 distinct sources, indicating a markedly fragmented and interdisciplinary publication landscape. The relatively low concentration of documents per source implies that research on EI in technology-mediated leadership contexts is not consolidated within a single disciplinary outlet; rather, it is dispersed across multiple academic domains, reflecting the field’s inherently cross-cutting character. The observed annual growth rate of 13.1% demonstrates sustained increase in scholarly attention over time, while the average document age of 2.36 years underscores the recency of the literature and signals an area that remains in active formation and expansion.

Table 1. Descriptive statistics.

Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	2004:2026
Sources (Journals, Books, etc.)	126
Documents	146
Annual Growth Rate %	13.1
Document Average Age	2.36
Average citations per doc	5.11
References	15274
DOCUMENT CONTENTS	
Keywords Plus (ID)	687
Author’s Keywords (DE)	500
AUTHORS	
Authors	380
Authors of single-authored docs	35
AUTHORS COLLABORATION	
Single-authored docs	40
Co-Authors per Doc	2.7
International co-authorships %	19.18
DOCUMENT TYPES	
article	58
book chapter	60
conference paper	28

Citation-based indicators further corroborate the interpretation of a developing research domain. An average of 5.11 citations per document reflects a moderate level of scholarly impact, consistent with a field that has yet to attain full conceptual and empirical maturity. Simultaneously, the presence of 15,274 cited references indicates that this body of work is anchored in a wide-ranging, heterogeneous intellectual foundation. The sub-

stantial number of Keywords Plus (687) and author-defined keywords (500) reinforces this observation, pointing to considerable conceptual dispersion and the absence of a stabilized or universally accepted terminological framework, an issue frequently noted in emerging interdisciplinary areas.

Patterns of authorship suggest moderate, though not extensive, levels of collaboration. The dataset includes 380 unique authors, with an average of 2.7 co-authors per document, indicating that research is predominantly conducted within relatively small collaborative teams. The proportion of international co-authorship (19.18%) remains comparatively limited, implying that while cross-national collaboration is present, it does not yet constitute a dominant mode of knowledge production. Moreover, the distribution of document types, spanning journal articles, book chapters, and conference papers, signals a field in transition, where established forms of scholarly dissemination coexist with more exploratory and emergent contributions. Ultimately, these descriptive indicators portray a research area that is expanding in scope and visibility, yet remains characterized by disciplinary dispersion, conceptual heterogeneity, and an ongoing process of intellectual consolidation.

The analysis of the most frequently occurring author keywords, as shown in Figure 2, provides an initial yet analytically meaningful indication of the dominant thematic orientations that structure the dataset. The terms artificial intelligence (56 occurrences), emotional intelligence (53 occurrences), and leadership (43 occurrences) emerge as the most salient conceptual anchors, thereby empirically confirming the study's positioning at the intersection of these three domains. Their prominence is not merely descriptive but indicative of a sustained and coherent scholarly effort to integrate affective and technological dimensions within contemporary leadership research.

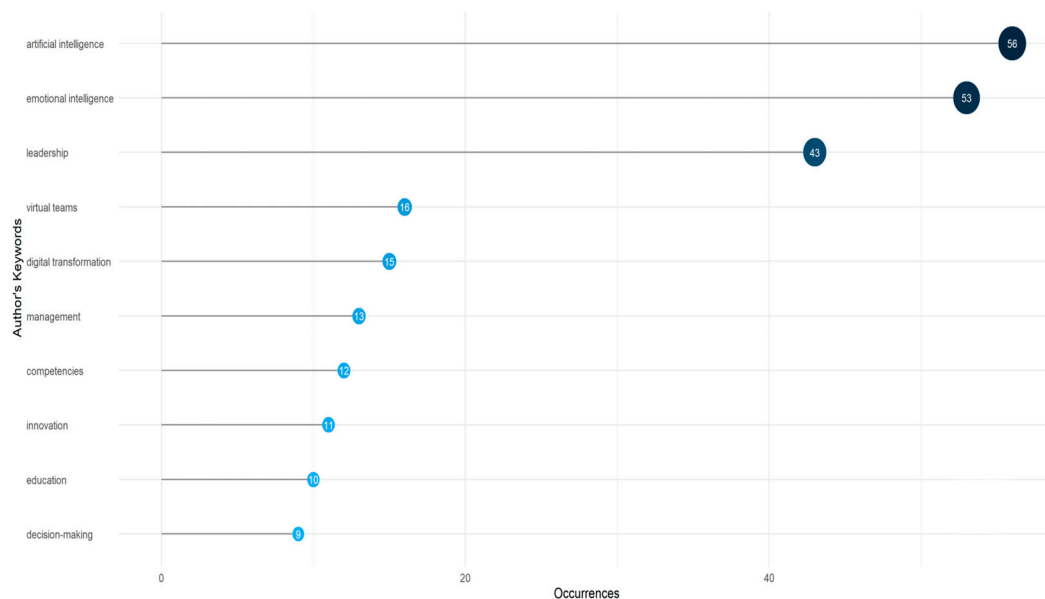


Figure 2. Most relevant author keywords.

Moving beyond these central constructs, the appearance of virtual teams (16) and digital transformation (15) signals that a considerable segment of the literature situates leadership within digitally mediated and organizationally reconfiguring environments. These keywords point to an increasing scholarly concern with geographically dispersed forms of collaboration and with the structural and cultural shifts associated with the diffusion of digital technologies across organizational settings. In this regard, the field appears to engage not only with leadership as a relational phenomenon but also with the evolving contexts in which such leadership is enacted.

The occurrence of terms such as management (13) and competencies (12) further underscores a pronounced orientation toward applied organizational contexts. More specifically, these keywords suggest an emphasis on the capabilities, skill sets, and behavioral repertoires required of leaders operating in technologically enriched environments. This reflects a broader tendency within the literature to translate abstract constructs, such as emotional intelligence, into actionable frameworks that inform leadership development and managerial practice.

Additional keywords, including innovation (11), education (10), and decision-making (9), indicate a further extension of the research domain into distinct functional and contextual arenas. Their presence reveals that emotional intelligence in technology-mediated leadership is not treated solely as a general theoretical construct, but is increasingly examined in relation to innovation processes, pedagogical environments, and the cognitive dimensions of managerial judgment. Such diversification of application domains is characteristic of fields that are actively expanding their empirical and theoretical boundaries.

Collectively, the distribution of keywords suggests a research landscape centered on the convergence of emotional intelligence, leadership, and artificial intelligence, while secondary thematic clusters reflect concerns about organizational transformation, distributed collaboration, and capability development. This pattern indicates that research is progressively moving beyond examining EI as an individual-level attribute toward considering it as a capability shaped by the technological and organizational contexts in which leadership is exercised. Moreover, the observable variation in keyword usage points to a notable degree of conceptual breadth and terminological inconsistency. This lack of lexical consolidation lends further support to the interpretation that the field is still developing a more coherent, standardized, and widely shared vocabulary, an expected feature of emergent interdisciplinary research areas. Accordingly, these thematic patterns delineate the principal conceptual domains through which emotional intelligence has been examined in technology-mediated leadership, thereby clarifying the field's current intellectual structure and thematic orientation.

Table 2 presents the ten most highly cited publications within the dataset, providing an overview of the intellectual foundations of research at the intersection of EI, leadership, and technology-mediated environments. Based on the dataset analysis, the most highly cited study, Mysirlaki and Paraskeva [33], examines the relationship between EI, transformational leadership, and virtual team effectiveness. The findings highlight that EI significantly predicts team performance, viability, and member satisfaction through its indirect effect via transformational leadership. This suggests that EI is commonly conceptualized as an antecedent of leadership effectiveness in digitally mediated team contexts.

Table 2. Top ten most cited papers.

Paper	Total Citations
MYSIRLAKI S [33], LEADERSH ORGAN DEV J	110
MOMTAZ PP [34], STRATEGIC MANAGE J	91
SPOSATO M [35], DEV LEARN ORGAN	53
AL-ANI B [36], LEADERSHIP	50
CHAUDHARY P [37], EMPLOYEE RELAT	46
DRIGAS A [38], SUSTAINABILITY	40
ROY SR [39], INT J E-COLLAB	36
YODER DM [40], COMMUNITY COLL J RES PRACT	21
ABINA A [41], SUSTAINABILITY	21
BANSAL G [42], COMMUN ASSOC INFO SYST	17

A related line of research is represented by Al-Ani et al. [36], which develops a framework for leadership in distributed teams that emphasizes the coordination of both task-oriented and socio-emotional processes, including trust, communication, and relationship-building. Similarly, Roy [39] argues that effective virtual leadership requires a combination of technical, relational, and emotional competencies, positioning EI as relevant for managing dispersed teams and maintaining cohesion. Taken together, these studies demonstrate that leadership in technology-mediated environments involves adapting socio-emotional competencies to conditions of limited physical co-presence.

Another group of highly cited studies extends emotional processes into computational and decision-making contexts. Momtaz [34] introduces an artificial EI approach to quantify CEO affective traits, showing that negative emotional signals influence firm valuation through conformity and signaling mechanisms. This approach incorporates emotional processes into computational and market-related contexts while maintaining their relevance for social perception.

More recent contributions reflect the integration of EI into AI-enabled organizational settings. Sposato [35] notes that leadership in AI-driven environments requires both technical knowledge and EI, particularly in managing organizational change and workforce transitions. Chaudhary et al. [37] further show that EI moderates the relationship between leaders' digital competencies and employee well-being in global virtual teams, supporting its role in mediated leadership processes.

Additional studies position EI within broader competence and development frameworks. Drigas et al. [38] propose a multi-layered model of EI supported by digital technologies for leadership development, while Abina et al. [41] identify EI as a core competence in digitally transformed and sustainability-oriented organizations. Earlier work by Yoder [40] links EI leadership to organizational climate and collaborative effectiveness. Bansal et al. [42] also highlight the relevance of EI and related human-centered capabilities in leadership responses to artificial intelligence in higher education contexts.

Overall, the citation profile suggests a multidimensional structure. Leadership in virtual and distributed environments is a central line of research, in which EI is associated with managing reduced-cue communication and maintaining relational dynamics. A second line of work connects emotional processes with intelligent systems, either through computational approaches or through leadership in AI-enabled environments. A third perspective situates EI within broader competence frameworks related to digital transformation. These patterns indicate that EI remains relevant in technology-mediated contexts, although the surrounding sociotechnical conditions shape its role.

4. Discussion

The findings of this study provide a structured account of how EI is conceptualized within leadership research under conditions of technological mediation. Overall, the results support the initial premise that this research area remains emergent, fragmented, and interdisciplinary. The observed growth in publications, combined with moderate citation impact and high conceptual dispersion, is consistent with patterns typically identified in developing research domains. In parallel, the literature underscores that the field draws upon established theoretical foundations while adapting them to evolving technological contexts.

The convergence of keyword frequencies and citation patterns demonstrates that EI remains a central explanatory mechanism in leadership research, particularly regarding relational outcomes such as communication, trust, and team effectiveness. Empirical syntheses demonstrate that EI is strongly associated with team cohesion, interpersonal communication quality, and collective performance outcomes [43,44]. However, the prominence of terms such as artificial intelligence, virtual teams, and digital transformation signals a shift

toward technologically mediated environments. Recent work on digital leadership confirms that leadership processes are increasingly enacted through digital infrastructures and virtual collaboration systems [45,46]. This finding aligns with earlier work on e-leadership, which conceptualizes leadership as a process shaped by information technologies and mediated communication structures [47]. In this context, EI appears to retain its relevance but operates under altered conditions, wherein emotional cues are filtered, delayed, or partially reconstructed through digital channels. Studies on computer-mediated communication and digital interaction support this claim, showing that emotional expression and interpretation are transformed into technology-mediated environments, thereby requiring adaptive socio-emotional competencies [48,49].

A complementary perspective emerges from the citation analysis, revealing the field's progressive expansion from digitally mediated interpersonal leadership toward broader sociotechnical perspectives that incorporate intelligent systems and digital transformation. Evidence from virtual team research indicates that EI, at both the individual and team levels, facilitates trust development and remains a central explanatory mechanism in leadership research, particularly regarding the quality of collaboration and performance under conditions of limited social interaction [50]. A second, more recent trajectory integrates emotional processes with intelligent systems, reflecting growing interest in AI-enabled communication and algorithmically mediated decision-making. This progression suggests that research interest has gradually shifted from understanding how technology mediates leadership interactions to examining how intelligent technologies actively participate in those interactions. Emerging research on emotion-AI and algorithmic systems suggests that emotional processes are increasingly intertwined with intelligent technologies, influencing communication, identity construction, and organizational trust [51,52]. A third perspective situates EI within broader competence frameworks for digital transformation, emphasizing the integration of socio-emotional and technological skills. This broadening of scope indicates an increasing emphasis on leadership capabilities that integrate socio-emotional competencies with digital and technological expertise. Studies on digital leadership competencies suggest that effective leadership in transformation contexts requires integrating EI with digital literacy and adaptive capabilities [53,54]. Taken together, these strands suggest that EI is not diminished by technological mediation but is instead reconfigured as a context-dependent capability embedded within sociotechnical systems [55].

Figure 3 synthesizes the principal thematic patterns identified through the bibliometric analysis into an integrative framework of EI in technology-mediated leadership. The framework demonstrates how digitally mediated leadership environments reshape the enactment of leadership by creating conditions in which EI is expressed through adaptive interpersonal communication, emotional regulation, trust building, and other socio-emotional competencies. Rather than portraying a linear causal sequence, it consolidates the dominant scholarly trajectories into a unified analytical perspective that captures the field's multidimensional nature. Within this perspective, EI is conceptualized as a context-sensitive leadership capability whose application is shaped by digitally mediated interactions and consistently associated with leadership and organizational outcomes in the literature. Accordingly, the proposed framework provides a synthesized representation of the field's contemporary intellectual landscape while clarifying the principal conceptual relationships underpinning current scholarship on EI in technology-mediated leadership.

These findings carry several implications. Conceptually, they support a shift from static, individual-level models of EI toward more dynamic, context-sensitive frameworks that account for mediated interactions and human–technology interdependence. Methodologically, the observed heterogeneity highlights the need for clearer alignment between EI constructs and the specific affordances of digital environments, particularly regarding their

measurement and operationalization [56]. From a practical perspective, the results suggest that leadership development should integrate emotional and technological competencies to reflect the hybrid demands of contemporary organizational settings.

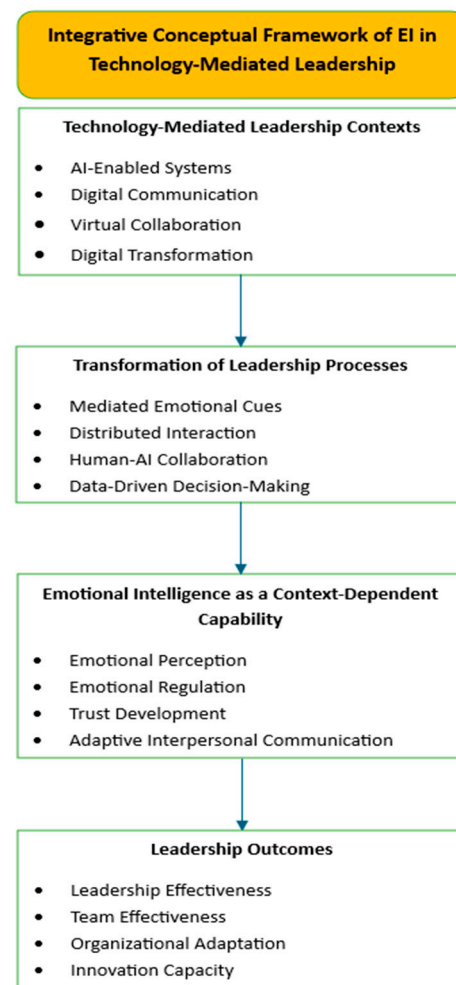


Figure 3. Integrative conceptual framework of EI in technology-mediated leadership.

Collectively, the findings suggest that the evolution of this research domain extends well beyond the increasing adoption of digital technologies, reflecting a broader reorientation in the understanding of EI within leadership scholarship. Rather than being viewed primarily as an individual psychological attribute, EI is progressively conceptualized as a context-sensitive capability whose application is shaped by digitally mediated communication, intelligent technologies, and evolving organizational environments. As synthesized in the proposed framework, this transformation underscores the growing convergence of socio-emotional and technological perspectives, offering a more holistic account of how leadership is enacted in digitally enabled organizational settings.

The study is subject to several limitations. First, the exclusive reliance on the Scopus database, while ensuring consistency and comparability, may constrain coverage by excluding relevant studies indexed in other databases. Second, the use of predefined search terms and subject-area restrictions, although necessary for conceptual precision, may exclude adjacent or emerging research employing alternative terminology. Third, bibliometric methods capture structural and relational patterns within the literature but do not provide direct insight into causal mechanisms or contextual depth. Finally, the inclusion of multiple document types, such as articles, conference papers, and book chapters, introduces variability in methodological rigor and citation practices, which may influence the observed patterns.

Future research should move beyond descriptive mapping toward more theoretically and methodologically integrated investigations of EI in technology-mediated leadership. A primary priority concerns the adaptation and validation of EI measurement frameworks for digitally mediated environments, as existing instruments are largely grounded in face-to-face interaction and may not adequately capture processes of emotion perception and regulation in textual, asynchronous, or AI-assisted communication contexts. In parallel, there is a need for experimental, multi-method studies examining how AI-mediated communication tools influence core leadership outcomes, such as trust, perceived empathy, and authenticity, particularly in contexts where message production is partially delegated to intelligent systems. Further research should also examine the interaction between EI and algorithmic decision-making, focusing on how leaders interpret and act upon data-driven insights, including potentially unreliable or biased affective indicators generated by AI systems. At a broader level, future work should conceptualize EI as a distributed and sociotechnical capability, examining how socio-emotional processes are shared across human–machine systems rather than residing solely within individual leaders. Finally, longitudinal and cross-contextual studies are required to assess how EI-related competencies evolve in response to ongoing technological change, thereby contributing to a more dynamic and context-sensitive understanding of leadership in digitally mediated environments.

5. Conclusions

This study provides a systematic bibliometric synthesis of the literature at the intersection of EI and leadership in technology-mediated environments. The findings indicate that the field is characterized by rapid growth, interdisciplinary dispersion, and conceptual heterogeneity, reflecting its emergent and evolving nature. Despite this fragmentation, a consistent pattern emerges: EI remains a central explanatory construct in leadership research, particularly regarding communication, trust, and team effectiveness. At the same time, its role is increasingly situated within digitally mediated contexts, where communication technologies and algorithmic systems shape the conditions of emotional perception and interaction.

The results further indicate a shift from traditional, individual-centered conceptualizations of EI toward more context-dependent and sociotechnical perspectives. Rather than diminishing the relevance of EI, the literature increasingly positions it as a leadership capability whose application is shaped by digitally mediated communication, AI-enabled systems, and data-driven organizational processes. This development highlights the need for greater conceptual integration and methodological alignment across disciplinary boundaries. By mapping the thematic, intellectual, and developmental structure of the field, this study contributes to a more systematic understanding of its current configuration and provides a basis for future research to refine theoretical frameworks and empirical approaches to leadership in technologically mediated environments.

Author Contributions: Conceptualization, N.K. and M.N.; methodology, N.K. and M.N.; software, M.N.; validation, N.K.; formal analysis, M.N.; investigation, N.K. and M.N.; resources, N.K. and M.N.; data curation, N.K. and M.N.; writing—original draft preparation, N.K. and M.N.; writing—review and editing, N.K.; visualization, M.N.; supervision, N.K.; project administration, N.K. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study are available on request from the corresponding author.

Conflicts of Interest: The authors declare no conflicts of interest.

Abbreviations

The following abbreviations are used in this manuscript:

EI Emotional Intelligence

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