BEYOND ARTIFICIAL INTELLIGENCE IDENTIFYING CRITICAL AREAS OF HUMAN INTERACTION ESSENTIAL FOR EFFECTIVE MANAGERIAL COMMUNICATION IN CONTEMPORARY BUSINESS ENVIRONMENT

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ABSTRACT

Artificial intelligence's rapid progression promotes the transformation of organizational processes, primarily managerial communication, into a new level of efficiency and predictability by virtue of predictive analysis and decision-making capabilities. But some of the uniquely human skills that are fuelling the effectiveness of good communication-the abilities of AI are irrelevant, such as emotional intelligence, empathy, and interpersonal interaction. This paper explores the implications of these factors of human interaction on the effectiveness of managerial communication in AI integrated business environment. A mixed-method approach combining qualitative and quantitative research methods has been used in the investigation of how emotional intelligence and interpersonal skills affect communication beyond the AI scope. From a representative set of 10-50 organizations using AI-driven tools, 200 respondents were used. Findings indicated that emotional intelligence, interpersonal skills, and trust are most relevant in communication leading to teamwork and engagement. The analysis showed that while AI may enhance the rate of communication, it still cannot match the emotional undertones and relational depth required in managerial communication. The findings would seem to indicate that there is no substitute for human-centric communication in managerial successes even in the age of AI. The study concludes by asserting that AI alone will not be able to replace emotional intelligence and interpersonal skills critical in fostering effective managerial communication.

Keywords: Artificial Intelligence, Managerial Communication, Emotional Intelligence, Interpersonal Skills, Business Communication, Human Interaction, AI Limitations, Leadership Effectiveness.

INTRODUCTION

Artificial intelligence changes the face of managerial practice today by improving operational efficiency, streamlining workflows, and applying data to inform decisions-a vital function in evolving organizations of today. Though AI-based software does provide specific strengths, especially in predictive analytics and information processing, it still lags far behind in trying to replicate human qualities in all senses, including the ones that are inherent to being a good manager, such as emotional intelligence, empathy, and skills in interpersonal relationships (Berente et al., 2021). Grounded in theories such as Social Exchange Theory (SET) and Human Relations Theory, it can be seen that managerial roles go beyond efficient task management toward relational, trust-based interactions. According to SET, relationships at work are exchange-based: reciprocity through recognition, support, and respect is sought as a form of return for the employees' efforts; trust and engagement, aspects AI cannot bring by itself, may be generated from this exchange. Similarly, Human Relations Theory puts forward the point that employee satisfaction and productivity are derived from empathy and people connections. A manager, being more genuinely caring and emotionally in tune, is much more likely to encourage

team cohesion and morale. Managers require intuition and social acumen in abstract complex situations- something an AI machine just cannot develop despite its analytical strengths. Workers are more confident and enthusiastic once valued and recognized by their leaders, research concluded (Rane et al., 2024). While AI presents one type of gains, these benefits can only be fully realized through the proper application of both AI and the distinctive human features that foster trust, teamwork, and a productive organizational culture in the modern workplace (Vrontis et al., 2023).

In the rapidly changing environments of today's business world, AI has brought tectonic changes in many organizational processes, varying from automation of work processes to data analysis, predictive modelling, and customer services. However, while AI promises to change everything, the most successful managerial communication is still, essentially, the product of uniquely human skills (Sarioguz & Miser, 2024). While AI systems are highly fast and accurate for processing and the delivery of information, this comes without the subtlety and nuance understanding of emotional contexts, empathy, and interpersonal subtleties so well entrenched in management (Andrejczuk, 2018). Increasing reliance on the use of AI-driven tools for efficiency in organizations, human dimensions in communicating cannot be discounted to ensure the passing of information in a manner that encourages trust, engagement, and collaboration. The purpose of this paper is to investigate the importance of such human interaction factors in managerial communication and how they, in turn, contribute to the leadership efficiency level in present-day business contexts (Komninos, 2006).

Managerial communication involves a lot of human interaction; that is, mixing interpersonal skills, emotional intelligence, and flexibility-all of these enable the interpretation, motivation, and support of other team members. Good managers are not just information transmitters; they are interpreters of nonverbal cues, listeners to feelings, and builders of a supporting and believable communicative environment (Perifanis & Kitsios, 2023). For instance, it grants a leader access to know and understand the emotional state of their subordinates and responds accordingly to build up rapport and an atmosphere of trust. Strong interpersonal skills enable the manager to deal more effectively with intricate interpersonal relationships, conflict handling or presentation with grace, and creating a collaborative work environment. These qualities cannot be easily imitated by AI because they are based on depth of empathy, perception, and adaptability roots embedded in human experience. The paper seeks to critically explore how such skills influence managerial communication in a way that cannot be emulated by any machine (Arslan et al., 2022).

The purpose of this study is to analyze how these human interaction factors influence the effectiveness of managerial communication in contemporary business settings. The study will provide evidence of how much the interpersonal skills and emotional intelligence contribute towards effective communication, pushing the boundaries beyond the technical capabilities of AI. Where AI features are often used to tout efficiencies in the business world, the findings of the study may touch on and underscore the value found in human-centered communication skills in manager roles.

OBJECTIVE

To test the impact of factors in human interaction on managerial communication effectiveness is tested in modern business with the help of statistical tools to identify significant relationships beyond AI capabilities.

To test whether AI alone can drive managerial communication effectiveness.

Hypothesis

H1:   *Human interactive factors, encompassing interpersonal skills and emotional intelligence, have an important influence on the effectiveness of managerial communication in the business scenario today, and artificial intelligence cannot be regarded as solely producing this effect.*

H2:   *AI cannot replace the impact of emotional intelligence and interpersonal skills in effective managerial communication.*

REVIEW OF LITERATURE

The high-speed adaptation of Artificial Intelligence has resulted in most sectors; this has changed the communication dynamics and organizational practices significantly. Therefore, it is very essential that some of the traditional theories and frameworks should be reappraised for their continued existence.

Guzman & Lewis (2020) examined how interactions between artificial intelligence (AI) and individuals—via virtual agents, socialbots, and language-generation software—do not conform to established communication theory paradigms that primarily address human-to-human communication. This article aims to bridge the gap between communication theory and emerging technology by delineating the distinctions between communicative AI and earlier technologies, while also presenting a theoretical framework for understanding these dynamics through the lens of human–machine communication (HMC) scholarship.

The research conducted by Dwivedi et al. (2021) consolidates insights from various esteemed experts to underscore the substantial opportunities, pragmatic evaluation of impacts, challenges, and prospective research agenda associated with the swift proliferation of AI across multiple domains: business and management, government, public sector, and science and technology. This study provides crucial and current insights on AI technology and its effects on the future of business and society, while acknowledging the social and industrial influences on the rate and direction of AI development.

Artificial intelligence (AI) and related technologies are being included into companies' human resource management (HRM) strategies for personnel management in both local and international organisations. Due to the fragmented nature of research and the limited existing literature, the study by Budhwar et al. (2022) presents a systematic review on the theme of this special issue, providing a nuanced understanding of current knowledge, gaps in understanding, and future research directions to establish a research agenda for international HRM.

The existing research by (Chowdhury et al., 2022) highlights the importance of collaborative intelligence arising from the successful cooperation of artificial intelligence (AI) systems and human workers to get organisationally desired results. The study's results provide managers and the AI community with essential evidence and techniques to cultivate collaborative intelligence capabilities inside businesses.

Mukherjee's 2022 paper investigates the prevalence of artificial intelligence (AI) in contemporary organisations, analyses the evolving nature of future employment in relation to AI applications, and examines the effects of AI on the national economy, particularly concerning the job market.

The significant rise in the use of Artificial Intelligence (AI) in global workplaces has substantial potential to enhance corporate profitability. Varma et al. (2023) assert that HR managers, as primary advocates for employees inside the organisation, must exhibit ethical sensitivity and accountability. They are responsible for meticulously overseeing AI projects to guarantee that these systems perform as claimed and uphold the dignity of the worker via openness about the data acquired and privacy about its use.

Therefore, the reviewed studies highly emphasize the transformative capacity of AI while underlining a balance comprising ethical considerations and intelligence through collaboration as well as a futuristic strategy in future research as well as in practice.

RESEARCH METHODOLOGY

The study used a mixed-methodologies approach, combining qualitative and quantitative research methods to investigate the influence of human interaction elements on the efficacy of management communication beyond the capabilities of artificial intelligence (AI).

A structured survey and semi-structured interviews were used to collect primary data, with the goal of capturing both quantitative insights into the role of interpersonal skills and emotional intelligence in managerial communication, as well as qualitative insights into how these human factors influence communication effectiveness in practice. Secondary data from relevant literature, academic journals, and industry reports were also utilised to give context and assist our knowledge of AI's limits in management communication.

The study's sample included management and non-managerial personnel from diverse organisations that used AI-driven communication tools, since they had direct experience with both AI systems and human-centered communication in business situations. A total of 200 respondents from diverse organizations were chosen using a convenience sample approach to provide a varied variety of opinions from various industries.

The quantitative data from the surveys was analysed using ANOVA (Analysis of Variance) to identify statistically significant relationships between human interaction factors and communication effectiveness, whereas the qualitative data from interviews was analysed thematically to uncover key patterns related to human interaction in managerial communication.

The results from both quantitative and qualitative data underscored the vital significance of human-centered communication in successful management practices, suggesting that emotional intelligence and interpersonal skills are still required in the corporate environment, even in the age of AI (Tables 1, 2, 3).

RESULTS

Demographic Profile of Respondents

Table 1 DEMOGRAPHIC PROFILE OF RESPONDENTS		
Demographic Variable	**Sub-Variable**	**Frequency**
Gender	Male	120
	Female	80
Age Group	18-25	50
	26-35	80
	36-45	40
	46-60	30
Designation	Manager	90
	Team Leader	60
	Senior Staff	30
	Junior Staff	20
Experience Level	Less than 5 years	70
	5-10 years	90
	More than 10 years	40

Descriptive Analysis

Table 2 DESCRIPTIVE ANALYSIS					
Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Interpersonal skills play a key role in managerial communication.	40%	45%	10%	3%	2%
Emotional intelligence enhances the effectiveness of communication.	50%	40%	5%	3%	2%
AI can replicate the empathy needed in managerial communication.	5%	10%	25%	35%	25%
Clear communication is important for fostering team trust.	55%	35%	5%	3%	2%
Non-verbal cues are crucial for effective managerial communication.	45%	40%	10%	3%	2%
Managers should adjust their communication style based on the emotional state of the team.	50%	40%	5%	3%	2%
AI tools improve the speed of communication but lack emotional context.	5%	15%	30%	35%	15%
Personalized communication helps in building stronger manager-employee relationships.	60%	30%	5%	3%	2%

Results of ANOVA

Table 1 RESULTS OF ANOVA			
Factor	Mean	F-Value	p-Value
Emotional Intelligence	4.3	15.25	0.001
Interpersonal Skills	4.1	12.75	0.002
AI-driven Communication Tools	3.2	6.5	0.05
Trust & Clarity in Communication	4.5	18.75	0.0001

The three factors, therefore, include emotional intelligence, interpersonal skills, and trust & clarity in communication, all of which have been proven to be significant at $p < 0.05$. Therefore, it can be claimed that the three human interaction factors add substantially to the effectiveness of managerial communication.

In the above analysis, it is noticed that "AI-driven communication tools" has a lesser F-value with a p-value of 0.05, which means although AI tools would hasten the process, there's no significant relationship between AI-driven tools and communication effectiveness when comparing the human factors involved (Table 4).

Table 4 RESULT OF HYPOTHESIS TESTING		
Objective	Hypothesis	Result
To test the impact of human interaction factors on managerial communication effectiveness.	Human interactive factors, such as interpersonal skills and emotional intelligence, significantly influence managerial communication effectiveness, beyond the capabilities of AI	Accepted
To test whether AI alone can drive managerial communication effectiveness.	AI cannot replace the impact of emotional intelligence and interpersonal skills in effective managerial communication	Accepted

In both cases, the hypothesis was accepted, and therefore, the significance of human interactive factors like emotional intelligence and interpersonal skills in driving effective

managerial communications in a modern business setting is reaffirmed. Yet, these human-centered elements of communication can never be replicated by AI alone.

DISCUSSION

The findings of this study emphasize how variables of emotional intelligence, interpersonal competencies, trust, and communication clarity came together to enhance management communication efficacy in this new corporate context. Computerized communication technologies increase AI usage, yet without emotional content, the processes may speed up, but there is a great importance in using human-centered communication. The descriptive analysis established that mostly respondents stressed the value of interpersonal skills and emotional intelligence, noting that those skills play an irreplaceable role in communication. Results on ANOVA indicated that the mean of emotional intelligence is 4.3, interpersonal skills mean, 4.1, and the mean for trust and clarity in communication is 4.5. They were significant, with p-values considerably below the 0.05 threshold, showing critical impact in the effectiveness of communication. Contrarily, AI-based communication technology had a moderate effect on communication effectiveness; mean = 3.2, p = 0.05. Hypothesis testing was done, and results prove that the human interacting constituents have a high impact on management communication and AI alone cannot replace the emotional and relational elements that make a good communication. This means that even if AI is used in some forms of communication, human contact would still need to be implemented in the building of strong, sympathetic, and successful management communications.

CONCLUSION

This research highlights the essential significance of human-centered communication in management performance, especially in the contemporary company environment where AI-driven technologies are progressively included into operations. The results substantiate the concept that emotional intelligence, empathy, and interpersonal skills are essential for successful management communication, qualities that AI cannot emulate. Rooted in Social Exchange Theory (SET) and the Human-AI Interaction and Trust-Building Framework, the study emphasises that although AI improves task efficiency and facilitates organised information dissemination, it is deficient in reciprocal value exchange and authentic emotional perception, both of which are crucial for fostering trust and engagement within teams. Proficient managers use emotional intelligence to address issues constructively, enhance participation, and promote a healthy organisational culture. Consequently, AI functions optimally as a supplementary instrument that improves operational procedures, whilst the subtleties of human interaction boost the efficacy of management techniques. This research advocates for organisations to incorporate AI in a manner that enhances efficiency and interpersonal trust, fostering a culture that harmonises technical prowess with fundamental human values. Future study may investigate how certain AI tools might be customised to enhance rather than replace human interactions in management, so strengthening the synergy between human intuition and AI skills in the workplace.

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