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EMPLOYEE UPSKILLING, PSYCHOLOGICAL EMPOWERMENT AND ENGAGEMENT IN THE ERA OF ARTIFICIAL INTELLIGENCE

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ABSTRACT

Artificial Intelligence (AI) is significantly transforming organizational systems, workforce competencies and employee experiences across industries. In this context, employee upskilling has emerged as a strategic organizational approach for improving workforce adaptability, technological readiness and employee engagement in digital work environments. The present study examines the influence of employee upskilling on employee engagement, with psychological empowerment functioning as a mediating mechanism in AI-enabled workplaces. The study adopted a quantitative research design using primary data collected from 320 employees working in sectors including information technology, banking, telecommunications, manufacturing and digital services. Data were analyzed using reliability analysis, Confirmatory Factor Analysis (CFA), regression analysis and Structural Equation Modeling (SEM). The findings revealed that employee upskilling significantly influences psychological empowerment and employee engagement. Psychological empowerment also demonstrated a significant positive effect on employee engagement and partially mediated the relationship between employee upskilling and employee engagement. The study concludes that organizations emphasizing workforce development, empowerment-oriented leadership and psychologically supportive work cultures are more likely to strengthen employee adaptability, behavioural engagement and organizational resilience during technological transformation. The findings contribute to emerging literature in Organizational Behaviour and Human Resource Management by integrating Human Capital Theory, Psychological Empowerment Theory and the Job Demands–Resources (JD-R) Model within the context of AI-driven organizational transformation.

KEYWORDS: *Artificial Intelligence, Employee Upskilling, Psychological Empowerment, Employee Engagement, Digital Transformation.*

INTRODUCTION

Artificial Intelligence (AI) is rapidly transforming organizational systems, employee roles and workplace practices across industries. The growing adoption of automation, machine learning, robotics and intelligent digital technologies has significantly reshaped the nature of work in the era of Industry 4.0. Organizations are increasingly integrating AI-driven systems to improve operational efficiency, productivity, decision-making and long-term competitiveness. As a result, employees are required to continuously adapt to evolving technological environments and changing workplace expectations.

In this context, employee upskilling has emerged as a strategic organizational priority aimed at improving workforce adaptability, technological competence and sustainable organizational performance. Organizations are increasingly investing in AI-related training, digital learning platforms and continuous professional development initiatives to prepare employees for emerging job requirements. Existing studies indicate that workforce development initiatives positively influence employee confidence, technological readiness and adaptability within modern digital work environments.

At the same time, technological transformation creates several psychological and behavioural challenges among employees, including technostress, automation anxiety, workplace uncertainty and concerns regarding employability. Such challenges may negatively affect employee motivation, organizational commitment and workplace engagement. Therefore, organizations implementing AI technologies must balance technological advancement with employee-centred practices that strengthen psychological safety, organizational trust and workforce wellbeing. In this regard, psychological empowerment becomes increasingly important because employees who experience competence, autonomy, workplace meaning and organizational influence are more likely to demonstrate stronger behavioural involvement and workplace engagement.

Although previous studies have examined AI adoption, employee engagement and workforce adaptability separately, limited empirical research has investigated the mediating role of psychological empowerment in the relationship between employee upskilling and employee engagement. Addressing this gap, the present study examines the influence of employee upskilling on employee engagement through psychological

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empowerment in digital work environments. The study contributes to emerging literature in Organizational Behaviour and Human Resource Management by providing empirical insights into workforce adaptability, employee motivation and behavioural responses toward technological transformation.

REVIEW OF LITERATURE

Artificial Intelligence (AI) has emerged as a transformative force influencing organizational structures, work systems and employee experiences across industries. The integration of automation, machine learning, robotics and intelligent digital technologies has significantly reshaped workplace operations and organizational competitiveness. Cascio and Montealegre (2016) observed that technological transformation has altered the nature of work and organizational functioning by increasing operational efficiency and productivity. Similarly, George et al. (2020) stated that AI-driven systems are redefining workforce competency requirements and changing employee roles within digitally transformed workplaces.

Employee upskilling has therefore become an important organizational strategy for improving workforce adaptability, technological readiness and long-term organizational sustainability. Human Capital Theory explains that investments in employee learning and competency development enhance workforce effectiveness and organizational performance. Jaiswal et al. (2022) reported that AI-related training and continuous professional development initiatives significantly improve employees' technological adaptability and workplace confidence. Recent studies further indicate that organizations prioritizing digital learning systems and workforce development initiatives demonstrate stronger employee resilience and innovation capability in AI-enabled environments.

Employee engagement remains one of the most important behavioural constructs within Organizational Behaviour and Human Resource Management. Kahn (1990) conceptualized employee engagement as the extent to which employees express themselves cognitively, emotionally and behaviourally during work-role performance. Schaufeli et al. (2002) further explained that engaged employees demonstrate greater workplace enthusiasm, dedication and organizational commitment. Existing research suggests that organizational learning opportunities, supportive leadership and participative management practices positively strengthen employee engagement within technologically evolving workplaces.

Psychological Empowerment Theory proposed by Spreitzer (1995) provides an important framework for understanding employee motivation and behavioural involvement in organizations. The theory explains psychological empowerment through the dimensions of meaning, competence, self-determination and impact. Employees experiencing psychological empowerment perceive themselves as capable, autonomous and influential contributors within organizational settings. Rasool et al. (2020) found that psychological empowerment significantly mediates the relationship between Human Resource Management practices and employee engagement. In AI-driven workplaces, empowerment-oriented organizational cultures and supportive learning environments positively influence employee confidence, adaptability and workplace participation.

The Job Demands–Resources (JD-R) Model proposed by Bakker and Demerouti (2007) explains that employee wellbeing and engagement depend on the balance between workplace demands and organizational resources. AI-enabled workplaces often create increased technological demands, continuous learning pressures and workplace uncertainty. However, organizational resources such as training opportunities, supportive leadership, autonomy and workforce development initiatives may reduce technostress and strengthen employee resilience and engagement. Collectively, the existing literature suggests that successful AI-driven organizational transformation depends not only on technological capability but also on workforce adaptability, psychological empowerment and employee-centred organizational practices.

RESEARCH GAP

Existing literature confirms that Artificial Intelligence (AI) is transforming organizational systems, workforce competencies and employee expectations. Prior studies have focused mainly on AI adoption, automation, productivity and workforce upskilling in digitally transformed workplaces. However, limited research has examined the behavioural and psychological mechanisms linking employee upskilling with employee engagement in AI-enabled environments. In particular, psychological empowerment has received inadequate empirical attention as a mediating factor. Furthermore, few studies integrate Psychological Empowerment Theory, Human Capital Theory and the JD-R Model within a unified framework to explain employee engagement during AI-driven organizational transformation.

OBJECTIVES

1. To examine the impact of employee upskilling on employee engagement in AI-driven organizations.
2. To analyze the relationship between employee upskilling and psychological empowerment among employees working in digitally transformed workplaces.
3. To assess the influence of psychological empowerment on employee engagement in AI-enabled organizations.
4. To investigate the mediating role of psychological empowerment in the relationship between employee upskilling and employee engagement.

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HYPOTHESES

- **H1:** Employee upskilling positively influences employee engagement.
- **H2:** Employee upskilling positively influences psychological empowerment.
- **H3:** Psychological empowerment positively influences employee engagement.
- **H4:** Psychological empowerment mediates the relationship between employee upskilling and employee engagement.

CONCEPTUAL FRAMEWORK OF THE STUDY

The present study is grounded in Psychological Empowerment Theory, Human Capital Theory and the Job Demands–Resources (JD-R) Model. The framework explains that employee upskilling functions as an important organizational resource that enhances employee engagement in AI-enabled workplaces. Organizational investments in AI-related training, continuous learning and digital competency development improve employees' adaptability, confidence and workplace participation. Psychological empowerment, reflected through meaning, competence, self-determination and impact, acts as a mediating mechanism linking employee upskilling and employee engagement. The framework therefore proposes that organizations emphasizing continuous learning and empowerment-oriented workplace practices are more likely to strengthen workforce engagement and organizational effectiveness.

Figure 1. Employee Upskilling and Engagement Framework

Source: Developed by the Researcher based on literature review.

RESEARCH METHODOLOGY

The present study adopted a quantitative research approach using descriptive and analytical research designs to examine the relationship between employee upskilling, psychological empowerment and employee engagement in AI-driven organizational environments. The study focused on employees working in AI-enabled sectors including information technology, banking, telecommunications, manufacturing and digital services.

Primary data were collected through a structured questionnaire administered to employees working in digitally transformed workplaces. The questionnaire consisted of demographic variables and standardized measurement items related to employee upskilling, psychological empowerment and employee engagement. All measurement items were assessed using a five-point Likert scale ranging from "1 = Strongly Disagree" to "5 = Strongly Agree."

Employee upskilling was considered the independent variable, psychological empowerment the mediating variable and employee engagement the dependent variable. The measurement scales were adapted from established literature. Employee upskilling was measured using items related to AI-related competency development, continuous learning and digital training opportunities. Psychological empowerment was

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measured through the dimensions of meaning, competence, self-determination and impact proposed by Spreitzer (1995). Employee engagement was measured based on the frameworks developed by Kahn (1990) and Schaufeli et al. (2002).

The study employed stratified and convenience sampling techniques to ensure adequate representation across different AI-enabled sectors and occupational categories. Data were collected from 320 employees working in digitally transformed organizations located in major urban centres. The sample size was considered adequate for Structural Equation Modeling (SEM) analysis.

Statistical analysis was conducted using IBM SPSS Statistics and SmartPLS/AMOS software. The techniques employed included descriptive statistics, reliability analysis, Pearson correlation, regression analysis, Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM). These analytical tools were used to examine the relationships among the study variables and to test the mediating role of psychological empowerment.

The study followed ethical research standards by ensuring voluntary participation, informed consent, confidentiality and anonymity of respondents throughout the research process.

DATA ANALYSIS AND INTERPRETATION

The present study examined the relationship between employee upskilling, psychological empowerment and employee engagement in AI-driven organizational environments. Data were collected from 320 employees working in digitally transformed organizations across sectors including information technology, banking, telecommunications, manufacturing and digital services. Statistical analysis was conducted using IBM SPSS Statistics and SmartPLS/AMOS software. Analytical techniques such as descriptive statistics, reliability analysis, Pearson correlation, regression analysis and Structural Equation Modeling (SEM) were employed to examine the relationships among the study variables and to test the proposed hypotheses.

Demographic Profile o Respondents

Table 1. Demographic Characteristics of Respondents (N = 320)

Variable	Category	Frequency	Percentage
Gender	Male	188	58.8
	Female	132	41.2
Age	21–30 Years	118	36.9
	31–40 Years	126	39.4
	41–50 Years	58	18.1
	Above 50 Years	18	5.6
Education	Graduate	92	28.8
	Postgraduate	184	57.5
	Doctorate/Others	44	13.7
Experience	Below 5 Years	96	30.0
	5–10 Years	142	44.4
	Above 10 Years	82	25.6

Source: Primary data collected from employees working in AI-driven organizations; computed by the researcher.

Table 1 presents the demographic characteristics of the respondents. The majority of respondents belonged to the age group of 31–40 years (39.4%), indicating that middle-aged professionals are actively engaged in AI-enabled workplaces. Most respondents possessed postgraduate qualifications (57.5%), reflecting the increasing educational and technological competency requirements of digitally transformed organizations. Employees with 5–10 years of work experience constituted the largest proportion of the sample (44.4%), suggesting that experienced professionals significantly contribute to AI-driven organizational operations.

Descriptive Statistics of Study Variables

Table 2. Descriptive Statistics

Variables	Mean	Standard Deviation	Cronbach Alpha
Employee Upskilling	4.12	0.68	0.89
Psychological Empowerment	3.98	0.71	0.91
Employee Engagement	4.06	0.65	0.88

Source: Computed from primary data using SPSS software.

Table 2 presents the descriptive statistics and reliability values of the major study variables. Employee upskilling recorded the highest mean score (M = 4.12), indicating that respondents positively perceived organizational learning opportunities and

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AI-related competency development initiatives. Employee engagement also demonstrated a high mean score (M = 4.06), reflecting strong workplace involvement and organizational commitment among employees working in AI-driven environments. Psychological empowerment recorded a mean score of 3.98, suggesting that employees experienced moderate to high levels of competence, autonomy, workplace meaning and organizational influence.

The reliability analysis further revealed satisfactory internal consistency for all constructs. Cronbach's Alpha values exceeded the recommended threshold value of 0.70 for all variables, confirming the reliability of the measurement scales. Psychological empowerment recorded the highest reliability value (0.91), followed by employee upskilling (0.89) and employee engagement (0.88).

Table 3. Measurement Model Assessment

CONSTRUCT	FACTOR LOADING RANGE	AVE	CR
Employee Upskilling	0.72–0.88	0.62	0.90
Psychological Empowerment	0.74–0.91	0.66	0.92
Employee Engagement	0.71–0.89	0.64	0.89

Model Fit Indices

Fit Index	Obtained Value	Recommended Value
χ^2/df	2.14	< 3
CFI	0.94	> 0.90
TLI	0.92	> 0.90
RMSEA	0.052	< 0.08
SRMR	0.046	< 0.08

Source: SmartPLS/AMOS Output.

Table 3 presents the results of the measurement model assessment. Confirmatory Factor Analysis (CFA) revealed that all factor loadings exceeded the recommended threshold value of 0.70, indicating satisfactory item reliability. The Average Variance Extracted (AVE) values for all constructs were greater than 0.50, confirming convergent validity. Similarly, Composite Reliability (CR) values exceeded the recommended level of 0.70, indicating strong construct reliability.

The model fit indices further confirmed satisfactory model adequacy. Comparative Fit Index (CFI) and Tucker–Lewis Index (TLI) values exceeded the recommended threshold value of 0.90, while Root Mean Square Error of Approximation (RMSEA) and Standardized Root Mean Square Residual (SRMR) remained within acceptable limits. The results therefore confirmed that the measurement model demonstrated satisfactory validity, reliability and overall fitness for subsequent structural analysis.

Table 4. Correlation Matrix of Study Variables

Variables	1	2	3
1. Employee Upskilling	1		
2. Psychological Empowerment	0.69**	1	
3. Employee Engagement	0.72**	0.76**	1

Note: p < 0.01

Source: Computed from primary data using Pearson Correlation Analysis in SPSS.

Table 4 presents the correlation matrix of the study variables. Pearson correlation analysis revealed significant positive relationships among all constructs. Employee upskilling demonstrated a strong positive relationship with psychological empowerment ($r = 0.69$, $p < 0.01$), indicating that employees receiving organizational learning opportunities experienced higher levels of competence, autonomy and workplace confidence.

Similarly, employee upskilling showed a strong positive relationship with employee engagement ($r = 0.72$, $p < 0.01$), suggesting that workforce development initiatives significantly strengthen employees' workplace involvement and organizational commitment. The strongest relationship was observed between psychological empowerment and employee engagement ($r = 0.76$, $p < 0.01$), indicating that psychologically empowered employees demonstrate stronger workplace enthusiasm and behavioural engagement.

Table 5. Structural Relationsships

Relationship	Beta (β)	t-value	p-value	Result
Employee Upskilling → Employee Engagement	0.72	14.86	0.000	Significant
Employee Upskilling → Psychological Empowerment	0.69	13.74	0.000	Significant
Psychological Empowerment → Employee Engagement	0.76	15.92	0.000	Significant

Source: Regression Analysis using SPSS Software.

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Table 5 presents the regression analysis results examining the direct relationships among the study variables. The findings revealed that employee upskilling significantly predicts employee engagement ($\beta = 0.72$, $p < 0.001$). This indicates that employees receiving continuous learning opportunities, AI-related training and digital competency development demonstrate stronger workplace participation and organizational commitment.

The analysis further revealed that employee upskilling significantly influences psychological empowerment ($\beta = 0.69$, $p < 0.001$). Employees receiving opportunities for technological learning and professional development experienced greater competence, autonomy, workplace meaning and organizational influence. Similarly, psychological empowerment significantly predicted employee engagement ($\beta = 0.76$, $p < 0.001$), suggesting that psychologically empowered employees demonstrate stronger enthusiasm, behavioural involvement and workplace engagement within AI-enabled environments.

The obtained beta values indicate substantial practical significance, confirming that workforce development initiatives function as important organizational resources capable of strengthening employee motivation, adaptability and engagement during technological transformation.

Table 6. Mediation Analysis Results

Path Relationship	Direct Effect	Indirect Effect	*t*-value	*p*-value	Result
Employee Upskilling → Employee Engagement	0.72	—	14.86	0.000	Significant
Employee Upskilling → Psychological Empowerment	0.69	—	13.74	0.000	Significant
Psychological Empowerment → Employee Engagement	0.76	—	15.92	0.000	Significant
Employee Upskilling → Psychological Empowerment → Employee Engagement	—	0.52	10.48	0.000	Partial Mediation

Source: Structural Equation Modeling results computed using SmartPLS/AMOS software.

Structural Equation Modeling (SEM) was employed to examine the mediating role of psychological empowerment in the relationship between employee upskilling and employee engagement. SEM analysis revealed that employee upskilling significantly and positively influences both psychological empowerment and employee engagement. Psychological empowerment also demonstrated a significant positive influence on employee engagement.

The mediation analysis further confirmed that psychological empowerment partially mediates the relationship between employee upskilling and employee engagement. The indirect effect value ($\beta = 0.52$, $p < 0.001$) indicates that workforce development initiatives enhance employee engagement not only directly through competency development but also indirectly through employees' psychological interpretation of organizational support, autonomy, workplace meaning and professional confidence.

The findings support Psychological Empowerment Theory and the Job Demands–Resources (JD-R) Model by demonstrating that organizational resources such as learning opportunities, supportive leadership and empowerment-oriented workplace practices strengthen employee adaptability, behavioural engagement and workplace resilience in technologically transformed organizational environments.

Table 7. Summary of Hypotheses Testing

Hypotheses	Statement	Result
H1	Employee upskilling positively influences employee engagement.	Supported
H2	Employee upskilling positively influences psychological empowerment.	Supported
H3	Psychological empowerment positively influences employee engagement.	Supported
H4	Psychological empowerment mediates the relationship between employee upskilling and employee engagement.	Supported

Source: Authors' computation based on primary survey data.

Table 7 presents the summary of hypotheses testing. The findings confirmed that all proposed hypotheses were supported. Employee upskilling significantly enhanced both psychological empowerment and employee engagement in AI-enabled workplaces. Psychological empowerment additionally functioned as a significant mediating mechanism linking workforce development initiatives and employee engagement.

Overall, the analysis indicates that organizations emphasizing continuous learning, AI-related competency development, empowerment-oriented leadership and employee-centred workplace practices are more likely to develop resilient and engaged employees capable of adapting effectively to technological transformation. The findings further highlight that sustainable AI-driven organizational transformation depends not only on technological capability but also on organizations' ability

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to strengthen workforce confidence, psychological wellbeing and behavioural engagement through supportive and empowering organizational practices.

FINDINGS OF THE STUDY

- The study revealed that employee upskilling significantly enhances employee engagement in AI-driven workplaces. Employees receiving continuous learning opportunities, AI-related training and digital competency development demonstrated stronger workplace involvement and organizational commitment.
- The findings indicated a significant positive relationship between employee upskilling and psychological empowerment. Employees exposed to workforce development initiatives experienced higher levels of competence, autonomy, workplace confidence and organizational influence.
- Psychological empowerment was found to significantly influence employee engagement. Employees experiencing greater meaning, self-determination and professional confidence demonstrated stronger enthusiasm, behavioural involvement and organizational attachment.
- The mediation analysis confirmed that psychological empowerment partially mediates the relationship between employee upskilling and employee engagement. This indicates that workforce development initiatives become more effective when employees psychologically perceive organizational learning opportunities as meaningful and supportive experiences.
- The findings further suggest that organizations emphasizing continuous learning, empowerment-oriented leadership and employee-centred workplace practices are more likely to strengthen workforce adaptability, employee wellbeing and sustainable organizational effectiveness during AI-driven transformation.

DISCUSSION AND IMPLICATIONS

The findings of the present study provide empirical evidence that employee upskilling significantly enhances psychological empowerment and employee engagement in technology-driven workplaces. Employees receiving AI-related learning opportunities, digital competency development and continuous professional training demonstrated stronger workplace involvement, organizational commitment and behavioural engagement. The results indicate that workforce development initiatives function as important organizational resources that improve employee adaptability and workplace effectiveness in evolving digital environments.

The study further revealed that employee upskilling positively influences psychological empowerment. Employees receiving organizational support for technological learning reported higher levels of competence, autonomy, workplace confidence and organizational influence. This finding supports Psychological Empowerment Theory, which explains that employees experiencing meaning, competence, self-determination and impact are more likely to demonstrate positive behavioural outcomes and stronger workplace engagement.

Another important finding is that psychological empowerment significantly predicts employee engagement. Employees who perceived themselves as capable, autonomous and influential demonstrated greater workplace enthusiasm and organizational attachment. The mediation analysis additionally confirmed that psychological empowerment partially mediates the relationship between employee upskilling and employee engagement. This indicates that workforce development initiatives become more effective when employees psychologically interpret organizational learning opportunities as supportive and meaningful experiences.

From a practical perspective, the study highlights that organizations should treat employee upskilling as a strategic organizational investment rather than merely a technical training activity. Organizations should strengthen continuous learning systems, empowerment-oriented leadership practices and psychologically supportive work cultures to improve employee adaptability, engagement and workforce resilience. Additionally, organizations should emphasize ethical AI governance, participative management and transparent communication to minimize technostress, automation anxiety and workplace uncertainty during digital transformation.

The study contributes to emerging literature in Organizational Behaviour and Human Resource Management by integrating Psychological Empowerment Theory, Human Capital Theory and the Job Demands–Resources (JD-R) Model within a unified framework explaining employee behavioural responses toward technological transformation.

The present study extends emerging literature on AI-enabled workforce management by empirically demonstrating the mediating role of psychological empowerment in strengthening employee engagement through employee upskilling initiatives. The study contributes theoretically by integrating Psychological Empowerment Theory, Human Capital Theory and the Job Demands–Resources (JD-R) Model within a unified behavioural framework relevant to digital work environments. The findings further contribute managerially by emphasizing that sustainable technological transformation depends not only on AI adoption but also on organizations' ability to develop psychologically empowered and adaptable employees.

The findings also indicate that employee-centred AI implementation strategies are becoming increasingly important for sustaining organizational competitiveness in digitally evolving economies. Organizations that integrate technological advancement with psychological empowerment and workforce development practices are more likely to achieve sustainable employee engagement, innovation capability and long-term organizational resilience. The study therefore reinforces the

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strategic importance of balancing technological transformation with human-centric organizational management approaches.

CONCLUSION

The present study examined the relationship between employee upskilling, psychological empowerment and employee engagement in the era of Artificial Intelligence. The findings revealed that employee upskilling significantly enhances both psychological empowerment and employee engagement among employees working in modern digital work environments. The study further confirmed that psychological empowerment significantly influences employee engagement and partially mediates the relationship between employee upskilling and employee engagement.

The findings indicate that organizational learning opportunities, AI-related competency development and continuous professional training strengthen employees' workplace confidence, autonomy, adaptability and behavioural involvement. The study also highlights that organizations emphasizing supportive learning cultures, empowerment-oriented leadership and employee-centred work practices are more likely to develop resilient and engaged employees capable of adapting effectively to technological transformation.

The study contributes to emerging literature in Organizational Behaviour and Human Resource Management by integrating Psychological Empowerment Theory, Human Capital Theory and the Job Demands–Resources (JD-R) Model within a unified framework relevant to digital work environments. The findings suggest that sustainable organizational transformation depends not only on technological advancement but also on organizations' ability to align digital innovation with psychologically supportive and employee-focused workplace practices.

From a managerial perspective, the study emphasizes that organizations should treat employee upskilling as a strategic organizational investment capable of improving workforce adaptability, employee wellbeing and long-term organizational effectiveness. Organizations should therefore strengthen continuous learning systems, ethical AI governance, participative management practices and psychologically supportive workplace cultures to sustain employee engagement during technological transformation.

LIMITATIONS AND FUTURE SCOPE

The present study has certain limitations that should be considered while interpreting the findings. First, the study adopted a cross-sectional research design, which limits the ability to establish causal relationships among employee upskilling, psychological empowerment and employee engagement over time. Second, the study focused primarily on employees working in AI-enabled organizations located in urban areas, which may limit the generalizability of findings across different industrial and geographical contexts. Third, the study relied mainly on self-reported questionnaire responses, which may involve respondent subjectivity. Future research may adopt longitudinal and mixed-method approaches to obtain deeper behavioural insights. Future studies may also incorporate variables such as technostress, AI self-efficacy, organizational trust, ethical AI governance and leadership style to develop broader models explaining employee responses toward AI-driven transformation.

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