

Human Capital Perception in Hybrid Work Environments: A Qualitative Exploration of Artificial Intelligence Integration

Francisco Javier Mejía Ochoa

Tecnológico Nacional de México, Instituto Tecnológico Superior de Zongolica, Mexico.
ORCID: 0000-0002-8444-3081. Email: francisco_javier_mejia_125@zongolica.tecnm.mx



Paper type: Article

Received: 28 May 2025
Revised: 15 June 2025
Accepted: 16 June 2025
Published: 18 June 2025

Citation: Mejía Ochoa, F. J. (2025). Human capital perception in hybrid work environments: A qualitative exploration of artificial intelligence integration. *American Journal of Business Science Philosophy*, 2(1), 169–180.
<https://doi.org/10.70122/ajbsp.v2i1.34>

Abstract

Hybrid work environments that blend human labor with artificial intelligence (AI) systems reconceptualize assumptions about identity, agency, and value creation within the firm. Grounded in the philosophical postulate that organizational reality is a social construct, this study analyses how human capital interprets AI integration in companies located in the Sierra de Zongolica, Veracruz. A phenomenological design was employed; twenty-five semi-structured interviews and two focus groups were conducted with service, production, and administrative workers who interact daily with human–AI systems. Thematic coding revealed four interrelated constructs: AI as an operational enabler, perceived occupational well-being, enhanced professional autonomy, and holistic job satisfaction. Participants reported that AI lightens repetitive tasks, shortens cycle times, and broadens decision-making scope, thereby reducing stress and improving work–life balance. Concurrently, concerns arose regarding the loss of human interaction and job stability, particularly among longer-tenured employees. The findings indicate that AI functions as a contingent complement to human expertise; its value depends on transparent algorithms, upskilling programmes differentiated by age cohorts, and change management sensitive to the cultural context. The study concludes that corporate strategies and public policies must align technological efficiency with ethical governance so that digital transformation simultaneously fosters productivity and human development.

Keywords: human capital; hybrid work; professional autonomy; artificial intelligence

© 2025 The Authors. Published by American Open Science Philosophy. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Digital transformation in the twenty-first century is redefining the very essence of human labor and, consequently, the notion of human capital vis-à-vis artificial intelligence (AI). Empirical evidence shows that human–machine interaction reconfigures job functions and challenges workers' identity, autonomy, and existential meaning within increasingly hybrid environments (Kreuzwieser et al., 2023; Schleidgen et al., 2023; Bjerring & Busch, 2025; Fossa, 2024). In the face of this reality, organizations are compelled to reconsider both their productive processes and the nature of their internal social relations. Accordingly, human capital's perception of AI reveals shifts in the competencies required and a profound metamorphosis in the meanings attributed to work, labor dignity, and professional purpose (Bankins et al., 2022; Järvelä et al., 2024; Nguyen & Elbanna, 2025; Urrila et al., 2025).

This reconfiguration acquires relevance in specific sociocultural contexts such as the Sierra de Zongolica (Veracruz, Mexico), an Indigenous region characterized by strong community roots and a history of economic and technological marginalization. Here, AI transcends the mere adoption of digital tools; it entails rewriting the collective narrative that defines local human capital. Although numerous studies highlight AI's capacity

to boost productivity and reduce costs (Yang, 2022; Czarnitzki et al., 2023; Gao & Feng, 2023), qualitative investigations probing the philosophical and perceptual dimensions of these changes are scarce, especially in culturally sensitive communities like Zongolica. The effectiveness of any technological innovation largely depends on how it is assimilated and re-signified by the people involved.

Grounded in the premise that organizational reality is a social construction, this study adopts a phenomenological approach to explore how workers interpret and make sense of their interaction with human–AI hybrid systems. Emerging categories—operational efficiency, occupational well-being, professional autonomy, and job satisfaction—reveal perceptual patterns that condition the humanistic appropriation of technology. The central objective is therefore to unravel the narratives of human capital in the Sierra de Zongolica and to understand how subjective experiences, ethical expectations, and cultural frameworks influence AI integration (Adnan et al., 2022; Canbul Yaroğlu, 2024; Neumann et al., 2024). To this end, semi-structured interviews and focus groups are employed to capture the contextual richness of a phenomenon that simultaneously redefines work and the identity of those who perform it.

2. Literature Review

2.1. Integration of Artificial Intelligence in Work Environments

Artificial intelligence (AI) is reconfiguring organizational paradigms by introducing predictive algorithms and automated systems that elevate efficiency and refine decision making in hybrid contexts (Davenport et al., 2020; Pournader et al., 2021; Gupta et al., 2022; Espina-Romero et al., 2024). Nevertheless, this technological revolution raises philosophical and existential dilemmas concerning human identity, autonomy, and the meaning of work. Effective AI integration transcends the technical dimension, involving dynamics of resistance, adaptation, and technological acceptance (Li et al., 2023; Hoffman et al., 2025; Tan et al., 2025). These subjective processes remain largely unexplored through qualitative and phenomenological approaches, despite their relevance to successful technological adoption, particularly in culturally distinctive regions such as the Sierra de Zongolica.

2.2. Perception and Meaning in Hybrid Environments

The acceptance of intelligent technologies depends, above all, on how individuals interpret their impact on psychological, cultural, and social dimensions (Eng et al., 2024; Jaß et al., 2024; John et al., 2024; Marsh et al., 2024). Although workers recognize the operational benefits of automation, concerns arise over the loss of occupational identity, diminished autonomy, and professional displacement. These anxieties intensify in rural or marginalized regions, where labor constitutes a cornerstone of collective identity (Legun et al., 2023). In this context, two perceptual dimensions—occupational well-being and professional autonomy—mediate the relationship between AI and job satisfaction; understanding their interactions is therefore essential to evaluating technological implementation from a humanistic, situated perspective.

2.3. Humanistic Corporate Philosophy and Ethics

Recent literature underscores the need for business models that reconcile productivity with labor dignity, stressing the importance of human-centered AI (Bankins, 2021; Lepri et al., 2021; Fontrodona & Melé, 2022; Sison et al., 2023; Martini et al., 2024). Organizations that integrate AI with ethical sensitivity tend to achieve higher levels of satisfaction and engagement (Wamba, 2022; Tortorella et al., 2025). Even so, a gap persists in qualitative studies exploring the perceptual and cultural dimensions of AI in Indigenous communities such as the Sierra de Zongolica. This work addresses that gap through a phenomenological analysis that articulates technical, philosophical, and human factors.

2.4. Research Question

How do workers in the Sierra de Zongolica interpret their well-being and professional autonomy in their day-to-day interaction with human–AI hybrid systems?

3. Methodology

This study adopts a qualitative, phenomenological–interpretive approach aimed at uncovering the experiences and meanings that human capital attributes to the integration of artificial intelligence (AI) in hybrid work environments. Fieldwork was conducted in companies located in the Sierra de Zongolica, Veracruz (Mexico), an Indigenous region where traditional occupations intersect with emerging digitalization processes. A purposive sampling strategy was employed using three criteria: daily exposure to AI tools, diversity of roles—including service, production, and administrative positions—and a minimum tenure of one year in the post. Under these parameters, a sample of twenty-five workers was assembled. Data were collected through twenty-five semi-structured interviews designed to explore perceptions, emotions, and the re-signification of work, complemented by two focus groups that allowed for the contrasts and collective depths of the findings to be explored. The interview guides were validated by expert judgement and piloted with three participants, enabling the refinement of language, sequencing, and contextual relevance. Recordings were fully transcribed and subjected to thematic coding following Braun and Clarke’s (2006) procedure, which encompasses familiarization, generation of initial codes, theme development and review, and the subsequent definition and naming of categories. Matrices were processed and compiled in Microsoft Excel 2025. It should be noted that, in a phenomenological study, constructs are abstract concepts inductively derived from participants’ narratives. Table 1 presents four central constructs and their corresponding sub-constructs, which together provide the analytical framework for the results. The table articulates an inductive model of human–algorithmic co-production, revealing that AI adoption extends far beyond productivity metrics to permeate emotional, identity-related, and axiological layers. This framework can serve as a theoretical scaffold for future studies examining AI from the perspective of distributed work ecologies, where qualitative indicators become instruments for organizational diagnosis and ethical–technological design.

Table 1. Emerging qualitative constructs.

Construct	Interpretive Definition	Sub-constructs	Key Qualitative Indicators
AI as an Operational Enabler	Perception that intelligent systems simplify and enhance day-to-day work tasks.	a) Reduction of repetitive tasks. b) Optimization of work time.	<ul style="list-style-type: none"> • Decreased operational workload. • Time freed for strategic tasks. • Improved time management. • Relief of pressure.
Perceived Occupational Well-being	Emotional and psychological impact are attributed to AI in daily work life.	a) Stress reduction. b) Work–life balance. c) Depersonalization of work.	<ul style="list-style-type: none"> • Greater availability for personal life. • Fear of lost human interaction. • Data-driven decisions.
Enhanced Professional Autonomy	A sense of agency and decision-making control fostered by AI.	a) Increased decision-making control. b) Job proactivity.	<ul style="list-style-type: none"> • Reduced reliance on supervision. • Initiative to improve processes. • Curiosity and continuous knowledge acquisition. • Sense of progress and professional recognition.
Holistic Job Satisfaction	Global positive assessment of work in the presence of AI.	a) Motivation and continuous learning. b) AI as a complementary tool. c) Concern about future stability.	<ul style="list-style-type: none"> • Perception of AI as an ally that enhances competencies. • Calm is derived from technological support. • Unease or anxiety about possible job displacement.

4. Results

Table 2 provides the sociodemographic profile of the participants ($n = 25$), offering a detailed characterization of the human capital involved in the study. Gender was evenly balanced, with 52 % women and 48 % men. The largest age cohort was 31–40 years (40 %), followed by 20–30 years (36 %), while the remaining 24 % were 41–55 years old. Most participants (64 %) held a bachelor’s degree, whereas 28 % had technical or technological training and 8 % possessed postgraduate qualifications. As for employment sectors, 40 % worked in services (customer service, education, and healthcare), 36 % in productive activities (agribusiness and manufacturing), and 24 % in administrative or managerial roles. Regarding work experience, 48 % had 5–10 years of tenure, 32 % had fewer than 5 years, and 20 % had more than a decade. This profile indicates a diverse sample in terms

of age, education level, occupational sector, and professional trajectory, enabling a broad capture of perceptions about AI interaction.

Table 2. Sociodemographic profile of the participants (n = 25).

Variable	Category	Participants
Gender	Female	13
	Male	12
Age	20–30 years	9
	31–40 years	10
	41–55 years	6
Educational level	Technical	7
	Bachelor's degree	16
	Postgraduate degree	2
Employment sector	Services	10
	Productive	9
	Administrative	6
Work experience	< 5 years	8
	5 – 10 years	12
	> 10 years	5

Figure 1 presents an integrative conceptual model derived from human capital perceptions of human–AI hybrid systems. The model shows how artificial intelligence operates as an operational enabler, optimizing repetitive tasks and working times, which in turn engenders perceived occupational well-being manifested in lower stress and an improved work–life balance. Simultaneously, it illustrates how this technical optimization strengthens professional autonomy by widening decision-making latitude and fostering job proactivity. These elements converge in holistic job satisfaction, marked by continuous motivation, ongoing learning, and a broadly positive perception of AI as a complement rather than a substitute for the human worker—though this is tempered by emerging concerns about future employment stability.

Balancing AI Benefits and Human Well-being in Hybrid Work

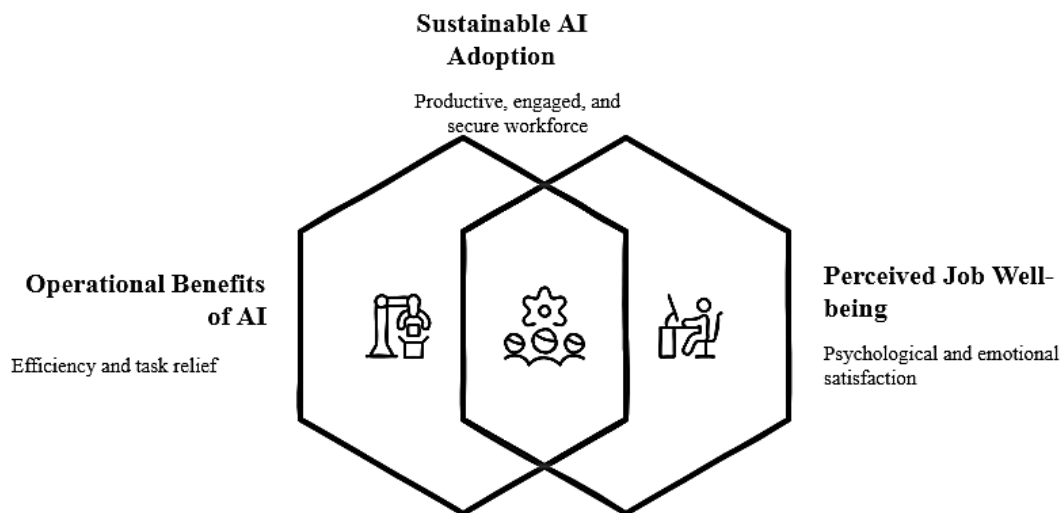


Figure 1. Inductive model of human–algorithmic co-production: A holistic human-capital perception of artificial intelligence.

Table 3 shows that AI adoption generates, at the operational level, a clear perception of efficiency: participants report a lower cognitive load, time optimization, and reduced stress associated with routine tasks. This technical benefit is accompanied by a positive impact on decision-making autonomy and motivation for continuous learning, creating a scenario of expanded work agency. However, psychosocial risks also emerge—namely, concern over the loss of meaningful human interaction, a sense of algorithmic supervision, and fear of job obsolescence. Taken together, the testimonies suggest that AI is becoming a lever for productivity and skills development, yet its sustainable integration demands organizational policies that mitigate depersonalization and provide assurances of professional stability.

Table 3. Voices of human capital.

Central Thematic Category	Emerging Subcategory	Participant	Direct Quote
Artificial Intelligence as Operational Enabler	Reduction of repetitive tasks	P3	"AI frees me from the most repetitive tasks, allowing me more time for tasks that truly add value."
		P9	"Thanks to AI, I spend less time on routine activities, letting me focus on other projects."
		P15	"The software automates tasks that used to take hours; now they're completed in minutes."
	Optimization of work time	P8	"When the system automates routine processes, I notice a reduction in cognitive load and can focus on strategic decisions."
		P18	"The technology clearly optimizes my time; I no longer need extra hours to finish my tasks."
		P22	"AI helps me better organize my day, reducing stress related to time management."
Perceived Occupational Well-being	Reduction of work-related stress	P12	"I feel less stressed knowing that AI is backing up my daily work."
		P17	"Now that routine tasks are automated, the anxiety of meeting deadlines has noticeably diminished."
		P24	"I no longer worry about errors in repetitive tasks; AI significantly reduces that pressure."
	Work-life balance	P7	"With AI managing administrative tasks, I achieve a better balance between my personal and professional life."
		P11	"Technology lets me finish my workday on time, improving my family life."
		P16	"Today, I have enough time for myself and my children; previously, this was nearly impossible."
	Concern about work depersonalization	P20	"Sometimes I feel that too much automation causes us to lose the human aspect of our daily activities."
		P23	"I'm concerned that work might become overly mechanical, forgetting the human interaction we once had."
Enhanced Professional Autonomy	Increased decision-making control	P5	"Now I make my own decisions; AI only provides data, but I choose the direction."
		P10	"AI provides me with real-time information, letting me make decisions with greater confidence and accuracy."
		P13	"I no longer constantly wait for authorization from my superiors; I can now act more autonomously."
	Increased job proactivity	P19	"Previously I waited for constant instructions; with AI, I plan my tasks autonomously."
		P25	"I've stopped being a passive receiver and become more proactive, seeking ways to optimize tasks using AI."
		P6	"My initiative has significantly grown since I've had precise data provided by intelligent systems."
Holistic Job Satisfaction	Motivation and continuous learning	P21	"AI provides immediate feedback, motivating me and improving my performance."
		P14	"My satisfaction increased because technology doesn't replace me; it enhances my skills."
		P4	"Every day I learn something new with AI; this keeps me motivated and engaged in my work."
	Technological identification as a facilitator	P2	"I see AI as valuable help, not as a threat; this reassures me professionally."
		P1	"Technological integration doesn't diminish my role; it actually boosts my professional skills."
		P18	"I perceive AI as a virtual colleague who perfectly complements my daily tasks."
	Concern about future job stability	P20	"Although I value AI, I'm concerned about whether my role will remain necessary in the near future."
		P23	"I feel uncertain about how my job will evolve with so much automation."
		P17	"I believe AI is useful, but honestly, sometimes I fear it might replace me in the long term."

Figure 2 illustrates, through a conceptual schematic, how human capital simultaneously perceives significant operational benefits and specific psychosocial risks arising from the implementation of artificial intelligence.

On the operational-benefit dimension, salient aspects include a substantial reduction in everyday work-related stress, optimization of time management, and a decrease in cognitive operational load. Conversely, on the psychosocial-risk dimension, perceptions emerge of the depersonalization of work activities, a decline in meaningful human interactions, a growing sense of algorithmic supervision, and heightened concern over uncertainty regarding future job stability.

AI integration's impact: Balancing operational benefits and psychosocial risks.

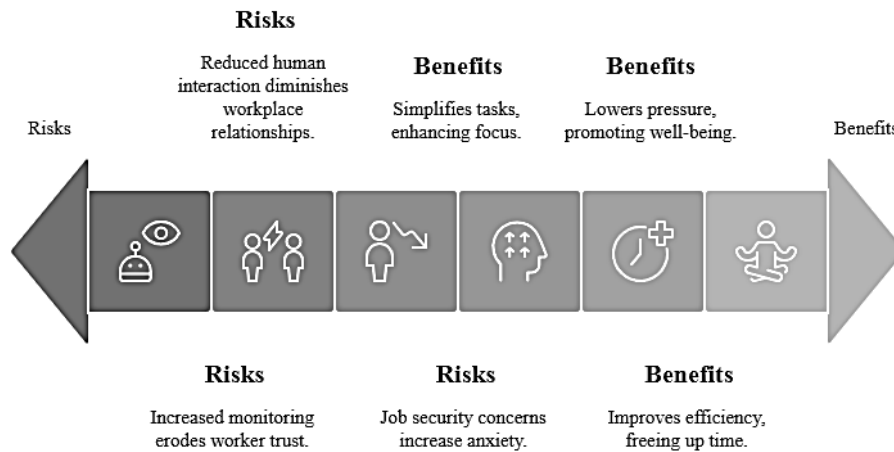


Figure 2. Perceptual map of operational benefits and psychosocial risks associated with AI adoption.

Table 4 reveals that the appraisal of AI varies markedly by career stage and age. Workers aged 20–30 with fewer than five years of experience view AI as an accelerator of professional development and a lever for autonomy, expressing only moderate concern about their future employment. The intermediate segment (31–40 years, 5–10 years of experience) recognizes the technology's practical value in relieving workload and reducing stress yet detects a layer of algorithmic oversight that could erode their decision-making latitude. By contrast, the senior group (41–55 years, more than a decade of service) questions AI from the standpoint of preserving relational capital: they perceive a loss of human interaction and foresee, with greater intensity, the risk of displacement. These divergences suggest that corporate implementation strategies should be segmented: skill-enhancement programs and clear career pathways for younger staff; algorithmic-transparency protocols and involvement in system design for the intermediate cohort; and expert-role preservation plus hybrid mentoring schemes for veteran talent. Such tailoring can mitigate resistance and optimize technology adoption across the entire demographic pyramid.

Table 4. Significant divergences by sociodemographic profile.

Sociodemographic Profile	Dominant Perception of AI	Main Expressed Concerns	Deep Qualitative Interpretation
Group 20–30 years Experience < 5 years	Positive and highly optimistic (P8, P9, P19, P25) "AI enhances my professional growth and workplace autonomy."	Moderate uncertainty regarding the future (P17, P23).	Greater technological adaptability and less fear of displacement.
Group 31–40 years Experience 5–10 years	Pragmatically positive (P5, P10, P12, P21) "AI facilitates my daily work and reduces stress."	Specific concerns about technological supervision (P20).	Instrumental adaptation; recognition of AI's practical value; concerns about gradual loss of autonomy.
Group 41–55 years Experience > 10 years	Cautious and critical (P17, P23, P24) "I appreciate the advantages, but I'm worried about losing real human contact."	High uncertainty regarding stability and future role (P17, P20, P23).	Greater cultural resistance to automation; profound fear of job displacement; strong valuation of human interaction.

Figure 3 illustrates generational contrasts in perceptions of artificial-intelligence adoption and integration in hybrid workplaces. Younger employees (20–30 years) exhibit a predominantly optimistic stance, viewing AI

as a clear catalyst for professional growth and enhanced workplace autonomy. In contrast, mid-career workers (31–40 years) acknowledge tangible operational benefits yet voice specific concerns about algorithmic oversight and the gradual erosion of their decision-making latitude. Senior employees (41–55 years) adopt a more critical and cautious position, prioritizing the preservation of relational capital and expressing significant apprehension over the loss of human interaction and the potential for job displacement.

Generational AI adoption perceptions: from optimism to caution.

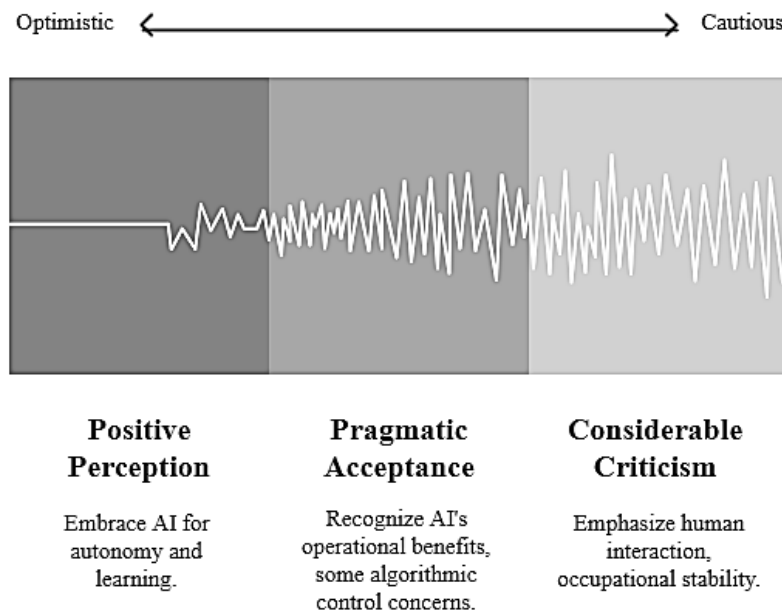


Figure 3. Generational divergences in perception of AI adoption in hybrid work environments.

Table 5 shows that AI is widely legitimized as both an operational lever and a driver of autonomy—reducing cognitive load, improving time management, and widening decision-making latitude—yet its positive effect on well-being and job satisfaction hinges on two risk foci detected in specific sociodemographic layers: perceptions of depersonalization and uncertainty about future employment. Whereas younger and mid-career workers maintain an overall favorable assessment, senior profiles associate technology with the erosion of human interaction and the potential obsolescence of their professional capital. This asymmetry confirms that capturing AI’s value requires segmented policies: transparent algorithmic architectures, governance mechanisms that preserve interpersonal contact, and upskilling plans differentiated by age cohort and career trajectory.

Table 5. Integrative analytical matrix.

Central Category	Common Deep Perceptions	Deep Interpretive Divergences
AI as an Operational Enabler	Consensus that AI reduces cognitive load and significantly optimizes working time.	Varied perceptions regarding the depth of impact based on age and work experience; older groups perceive fewer benefits.
Occupational Well-being	Broad agreement on clear reduction of everyday stress and improved work–life balance.	Older groups exhibit marked concerns about depersonalization and the loss of meaningful human interaction.
Professional Autonomy	Consensus that AI notably increases individual decision-making control.	Generational differences in perceptions of job proactivity; younger workers feel more empowered than older ones.
Job Satisfaction	High agreement on overall positive perception, particularly associated with continuous learning and recognition of AI as an enabler.	Significant divergences in future-oriented concerns; greater employment uncertainty among older and lower educational-level workers.

Figure 4 conceptualizes the interrelated factors that human capital identifies as critical for ensuring an effective and ethically attuned deployment of artificial intelligence in the Sierra de Zongolica. These elements include: (i) algorithmic transparency, deemed essential for reducing job-related uncertainty and perceptions of intrusive technological control; (ii) differentiated training tailored to the specific needs of each generational cohort, enabling effective and context-relevant adaptation to the technology; (iii) culturally sensitive change management, fundamental for achieving sustainable success in socioculturally particular settings; and (iv) the explicit, deliberate preservation of meaningful interpersonal bonds, indispensable for mitigating the negative effects associated with work depersonalization.

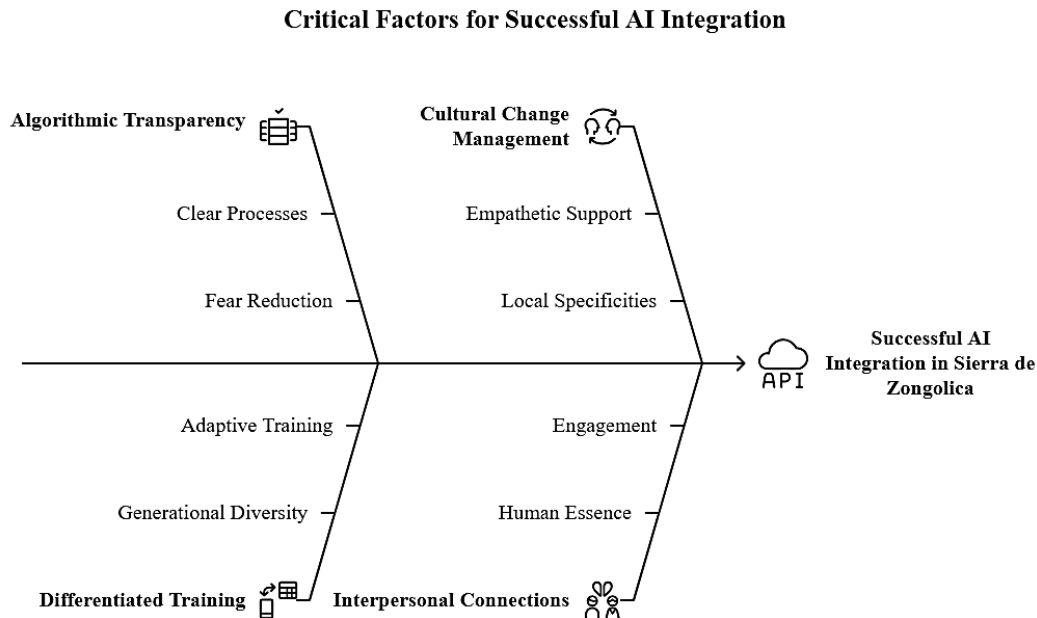


Figure 4. Critical factors for successful artificial intelligence in the cultural and labor context of Sierra de Zongolica.

5. Discussion

The findings indicate that artificial intelligence is perceived as an operational accelerator that reduces cognitive load and enables the shift of effort toward higher-value strategic activities—an observation consistent with evidence on cognitive off-loading and relief of work strain (Loureiro et al., 2023; Yorita et al., 2023; Jin et al., 2024; Kim & Lee, 2024). On the psychosocial dimension, participants describe lower stress levels and improved work–life balance; however, they warn that automation can erode meaningful human interaction (Nazareno & Schiff, 2021; Parent-Rochelleau & Parker, 2022). This duality confirms that technical benefits are consolidated only when the interpersonal bonds that give professional practice are preserved.

Professional autonomy emerges as the axis of experience: real-time data access increases decision-making confidence and stimulates initiative, validating the notion of expanded autonomy (Mirbabaie et al., 2022; Kong et al., 2023; Lombi & Rossero, 2023; Oh et al., 2025). Nevertheless, when algorithmic logic is opaque, the perception of covert surveillance re-emerges, as described in the literature on algorithmic management (Tang et al., 2023; Shao et al., 2024). Thus, AI enhances firms only if people maintain interpretability of its processes; in the absence of transparency, that sense of control dissipates.

Regarding job satisfaction, the technology is valued for enabling continuous learning trajectories and providing immediate feedback. This effect is more pronounced among younger workers, whereas longer-tenured employees express concern about employment stability and the possible obsolescence of their relational capital (Bergdahl et al., 2023; Handke et al., 2024; Xu et al., 2024; Sun et al., 2025). The distribution of AI-related benefits and risks is therefore asymmetric and mediated by career trajectory.

From a managerial standpoint, these results support the need for advanced training programs for newly hired staff; algorithmic-transparency protocols and participatory process redesign for mid-career workers; and mentoring schemes that capitalize on senior talent's experience and foster effective integration into hybrid teams. In the public-policy sphere, they reinforce the urgency of coupling digital infrastructure with contextualized training processes, especially in rural regions where occupational identity remains closely tied to the community.

Future research could adopt longitudinal designs or mixed methods approaches linking the evolution of these perceptions to indicators of productivity, social cohesion, and talent retention, and compare sectors with different levels of automation to identify narrative variations. In sum, the effective integration of AI requires balancing technical efficiency, human well-being, and algorithmic transparency so that the technology complements and enhances—rather than displaces—professional expertise.

6. Conclusions

Qualitative evidence indicates that artificial intelligence is being integrated into companies in the Sierra de Zongolica as a resource that lightens repetitive tasks, compresses cycle times, and redirects attention toward strategic functions. This operational gain translates into perceived well-being grounded in reduced stress and an improved work–life balance; simultaneously, there is a risk of depersonalization and uncertainty about job continuity, especially among longer-tenured workers with more traditional training. Regarding professional autonomy, real-time data availability broadens decision-making latitude and strengthens individual initiative, although such autonomy weakens when algorithmic logic is opaque or perceived as a form of covert supervision. These findings suggest that AI's value hinges on the coexistence of transparent algorithms, upskilling programs differentiated by age cohort, and change-management practices that acknowledge the region's sociocultural particularities. Organizations should design advanced training itineraries for newly hired staff, algorithm-explainability protocols for mid-career employees, and mentoring schemes that preserve the expert capital of the most experienced personnel. At the public-policy level, expanding digital infrastructure must be accompanied by context-specific training processes to prevent new exclusion gaps. Ultimately, workers interpret artificial intelligence as a facilitator that enhances their well-being by easing operational pressure and balancing the workday, and as a catalyst that expands their autonomy to decide and act; this positive assessment is tempered by concern over the loss of meaningful human interaction and job stability, particularly among employees with longer tenure.

Author Contributions:

Conceptualization: Francisco Javier Mejía Ochoa.

Data curation: Francisco Javier Mejía Ochoa.

Formal analysis: Francisco Javier Mejía Ochoa.

Funding acquisition: Francisco Javier Mejía Ochoa.

Investigation: Francisco Javier Mejía Ochoa.

Methodology: Francisco Javier Mejía Ochoa.

Project administration: Francisco Javier Mejía Ochoa.

Resources: Francisco Javier Mejía Ochoa.

Software: Francisco Javier Mejía Ochoa.

Validation: Francisco Javier Mejía Ochoa.

Visualization: Francisco Javier Mejía Ochoa.

Writing – original draft: Francisco Javier Mejía Ochoa.

Writing – review & editing: Francisco Javier Mejía Ochoa.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Data is available upon request from the authors.

Conflicts of Interest: The author(s) declares no conflicts of interest.

References

- Adnan, N., Bhatti, O. K., & Baykal, E. (2022). A phenomenological investigation on ethical leadership and workplace engagement from a multi-cultural perspective. *International Journal of Organizational Leadership*, 11(2), 206–234. <https://doi.org/10.33844/ijol.2022.60327>
- Bankins, S. (2021). The ethical use of artificial intelligence in human resource management: A decision-making framework. *Ethics and Information Technology*, 23, 841–854. <https://doi.org/10.1007/s10676-021-09619-6>
- Bankins, S., Formosa, P., Griep, Y., & Richards, D. (2022). AI decision making with dignity? Contrasting workers' justice perceptions of human and AI decision making in a human resource management context. *Information Systems Frontiers*, 24(3), 857–875. <https://doi.org/10.1007/s10796-021-10223-8>
- Bergdahl, J., Latikka, R., Celuch, M., Savolainen, I., Soares Mantere, E., Savela, N., & Oksanen, A. (2023). Self-determination and attitudes toward artificial intelligence: Cross-national and longitudinal perspectives. *Telematics and Informatics*, 82, Article 102013. <https://doi.org/10.1016/j.tele.2023.102013>
- Bjerring, J. C., & Busch, J. (2025). Artificial intelligence and identity: The rise of the statistical individual. *AI & Society*, 40, 311–323. <https://doi.org/10.1007/s00146-024-01877-4>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Li, C., Ashraf, S. F., Amin, S., & Safdar, M. N. (2023). Consequence of resistance to change on AI readiness: Mediating–moderating role of task-oriented leadership and high-performance work system in the hospitality sector. *SAGE Open*, 13, Article 21582440231217731. <https://doi.org/10.1177/21582440231217731>
- Canbul Yaroğlu, A. (2024). The effects of artificial intelligence on organizational culture in the perspective of the hermeneutic cycle: The intersection of mental processes. *Systems Research and Behavioral Science*, 41(3), 411–425. <https://doi.org/10.1002/sres.3037>
- Czarnitzki, D., Fernández, G. P., & Rammer, C. (2023). Artificial intelligence and firm-level productivity. *Journal of Economic Behavior & Organization*, 211, 188–205. <https://doi.org/10.1016/j.jebo.2023.05.008>
- Davenport, T. H., Guha, A., Grewal, D., & Bressgott, T. (2020). How artificial intelligence will change the future of marketing. *Journal of the Academy of Marketing Science*, 48(1), 24–42. <https://doi.org/10.1007/s11747-019-00696-0>
- Eng, I., Tjernberg, M., & Champoux Larsson, M. F. (2024). Hybrid workers describe aspects that promote effectiveness, work engagement, work-life balance, and health. *Cogent Psychology*, 11(1), Article 2362535. <https://doi.org/10.1080/23311908.2024.2362535>
- Espina-Romero, L., Gutiérrez Hurtado, H., Ríos Parra, D., Vilchez Pirela, R. A., Talavera-Aguirre, R., & Ochoa-Díaz, A. (2024). Challenges and opportunities in the implementation of AI in manufacturing: A bibliometric analysis. *Sci*, 6(4), 60. <https://doi.org/10.3390/sci6040060>
- Fontrodona, J., & Melé, D. (2022). Thinking about the future of work: Promoting dignity and human flourishing. *Humanistic Management Journal*, 7(2), 181–188. <https://doi.org/10.1007/s41463-022-00136-2>
- Fossa, F. (2024). Artificial intelligence and human autonomy: The case of driving automation. *AI & Society*, 40, 1851–1862. <https://doi.org/10.1007/s00146-024-01955-7>
- Gao, X., & Feng, H. (2023). AI-driven productivity gains: Artificial intelligence and firm productivity. *Sustainability*, 15(11), Article 8934. <https://doi.org/10.3390/su15118934>
- Gupta, S., Modgil, S., Bhattacharyya, S., & Bose, I. (2022). Artificial intelligence for decision support systems in the field of operations research: review and future scope of research. *Annals of Operations Research*, 308(1), 215–274. <https://doi.org/10.1007/s10479-020-03856-6>
- Handke, L., Aldana, A., Costa, P. L., & O'Neill, T. A. (2024). Hybrid teamwork: What we know and where we can go from here. *Small Group Research*, 55(5), 805–835. <https://doi.org/10.1177/10464964241279078>

- Hoffman, J., Wenke, R., Angus, R. L., Shinnars, L., Richards, B., & Hattingh, L. (2025). Overcoming barriers and enabling artificial intelligence adoption in allied health clinical practice: A qualitative study. *Digital Health*, 11, Article 20552076241311144. <https://doi.org/10.1177/20552076241311144>
- Jaß, L., Klußmann, A., Harth, V., & Mache, S. (2024). Job demands and resources perceived by hybrid working employees in German public administration: A qualitative study. *Journal of Occupational Medicine and Toxicology*, 19(1), 28. <https://doi.org/10.1186/s12995-024-00426-5>
- Järvelä, S., Zhao, G., & Nguyen, A. (2024). Hybrid intelligence: Human–AI coevolution and learning. *British Journal of Educational Technology*, 56(4), 1015–1032. <https://doi.org/10.1111/bjet.13560>
- Jin, G., Jiang, J., & Liao, H. (2024). The work affective well-being under the impact of AI. *Scientific Reports*, 14(1), 25483. <https://doi.org/10.1038/s41598-024-75113-w>
- John, B., Alsamarra'i, Z., & Panteli, N. (2024). Reconfiguring digital embeddedness in hybrid work: The case of employee experience management platforms. *Information Systems Journal*, 1–30. <https://doi.org/10.1111/isj.12545>
- Kim, B. J., & Lee, J. (2024). The mental health implications of artificial intelligence adoption: the crucial role of self-efficacy. *Humanities and Social Sciences Communications*, 11(1), 1-15. <https://doi.org/10.1057/s41599-024-04018-w>
- Kong, H., Yin, Z., Chon, K., Yuan, Y., & Yu, J. (2023). How does artificial intelligence (AI) enhance hospitality employee innovation? The roles of exploration, AI trust, and proactive personality. *Journal of Hospitality Marketing & Management*, 33(3), 261–287. <https://doi.org/10.1080/19368623.2023.2258116>
- Kreuzwieser, S., Kimmig, A., Michels, F., Bulander, R., Häfner, V., Bönsch, J., & Ovtcharova, J. (2023). Human-machine-interaction in innovative work environment 4.0—a human-centered approach. In *New digital work: Digital sovereignty at the workplace* (pp. 68-86). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-031-26490-0_5
- Legun, K., Burch, K. A., & Klerkx, L. (2023). Can a robot be an expert? The social meaning of skill and its expression through the prospect of autonomous AgTech. *Agriculture and Human Values*, 40(2), 501-517. <https://doi.org/10.1007/s10460-022-10388-1>
- Lepri, B., Oliver, N., & Pentland, A. (2021). Ethical machines: The human-centric use of artificial intelligence. *iScience*, 24(3), 102249. <https://doi.org/10.1016/j.isci.2021.102249>
- Lombi, L., & Rossero, E. (2023). How artificial intelligence is reshaping the autonomy and boundary work of radiologists. A qualitative study. *Sociology of Health & Illness*, 46(2), 200–218. <https://doi.org/10.1111/1467-9566.13702>
- Loureiro, S. M. C., Bilro, R. G., & Neto, D. (2023). Working with AI: can stress bring happiness? *Service Business*, 17(1), 233-255. <https://doi.org/10.1007/s11628-022-00514-8>
- Marsh, E., Perez Vallejos, E., & Spence, A. (2024). Digital workplace technology intensity: Qualitative insights on employee wellbeing impacts of digital workplace job demands. *Frontiers in Organizational Psychology*, 15, Article 1392997. <https://doi.org/10.3389/forgp.2024.1392997>
- Martini, B., Bellisario, D., & Coletti, P. (2024). Human-centered and sustainable artificial intelligence in Industry 5.0: Challenges and perspectives. *Sustainability*, 16(13), 5448. <https://doi.org/10.3390/su16135448>
- Mirbabaie, M., Brünker, F., Möllmann, N. R., & Stieglitz, S. (2022). The rise of artificial intelligence – Understanding the AI identity threat at the workplace. *Electronic Markets*, 32, 73–99. <https://doi.org/10.1007/s12525-021-00496-x>
- Nazareno, L., & Schiff, D. S. (2021). The impact of automation and artificial intelligence on worker well-being. *Technology in Society*, 67, 101679. <https://doi.org/10.1016/j.techsoc.2021.101679>
- Neumann, O., Guirguis, K., & Steiner, R. (2024). Exploring artificial intelligence adoption in public organizations: A comparative case study. *Public Management Review*, 26(1), 114–141. <https://doi.org/10.1080/14719037.2022.2048685>
- Nguyen, T., & Elbanna, A. (2025). Understanding human–AI augmentation in the workplace: A review and future research agenda. *Information Systems Frontiers*. <https://doi.org/10.1007/s10796-025-10591-5>
- Oh, J., Nah, S., & Yang, Z. D. (2025). How Autonomy of Artificial Intelligence Technology and User Agency Influence AI Perceptions and Attitudes: Applying the Theory of Psychological Reactance. *Journal of Broadcasting & Electronic Media*, 1–22. <https://doi.org/10.1080/08838151.2025.2485319>

- Parent-Rochelleau, X., & Parker, S. K. (2022). Algorithms as work designers: How algorithmic management influences the design of jobs. *Human Resource Management Review*, 32(3), 100838. <https://doi.org/10.1016/j.hrmr.2021.100838>
- Pournader, M., Ghaderi, H., Hassanzadegan, A., & Fahimnia, B. (2021). Artificial intelligence applications in supply chain management. *International Journal of Production Economics*, 241, Article 108250. <https://doi.org/10.1016/j.ijpe.2021.108250>
- Shao, Y., Huang, C., Song, Y., Wang, M., Song, Y. H., & Shao, R. (2024). Using augmentation-based AI tool at work: A daily investigation of learning-based benefit and challenge. *Journal of Management*. <https://doi.org/10.1177/01492063241266503>
- Schleiden, S., Friedrich, O., Gerlek, S., Assadi, G., & Seifert, J. (2023). The concept of “interaction” in debates on human–machine interaction. *Humanities and Social Sciences Communications*, 10, Article 345. <https://doi.org/10.1057/s41599-023-02060-8>
- Sison, A., Ferrero, I., García Ruiz, P., & Kim, T. W. (2023). Editorial: Artificial intelligence (AI) ethics in business. *Frontiers in Psychology*, 14, 1258721. <https://doi.org/10.3389/fpsyg.2023.1258721>
- Sun, M., Kraus, T., Pauli, R., & Garus, C. (2025). Changing sense of place in hybrid work environments: A systematic review of place identity and employee well-being. *Wellbeing, Space and Society*, 8, Article 100236. <https://doi.org/10.1016/j.wss.2025.100236>
- Tan, K.-L., Yeap, P. F., Cheong, K. C.-K., & Loganathan, S. R. (2025). Crafting an organizational strategy for the new era: A qualitative study of artificial intelligence transformation in a homegrown Singaporean hotel chain. *Business Process Management Journal*, 31(8), 104–123. <https://doi.org/10.1108/BPMJ-11-2024-1086>
- Tang, P. M., Koopman, J., Yam, K. C., De Cremer, D., Zhang, J. H., & Reynders, P. (2023). The self-regulatory consequences of dependence on intelligent machines at work: Evidence from field and experimental studies. *Human Resource Management*, 62(5), 721–744. <https://doi.org/10.1002/hrm.22154>
- Tortorella, G. L., Powell, D., Hines, P., Mac Cawley Vergara, A., Tlapa-Mendoza, D., & Vassolo, R. (2025). How does artificial intelligence impact employees’ engagement in lean organisations? *International Journal of Production Research*, 63(3), 1011–1027. <https://doi.org/10.1080/00207543.2024.2368698>
- Urrila, L., Siiriäinen, A., Mäkelä, L., & Kangas, H. (2025). Sense of belonging in hybrid work settings. *Journal of Vocational Behavior*, 157, 104096. <https://doi.org/10.1016/j.jvb.2025.104096>
- Wamba, S. F. (2022). Impact of artificial intelligence assimilation on firm performance: The mediating effects of organizational agility and customer agility. *International Journal of Information Management*, 67, Article 102544. <https://doi.org/10.1016/j.ijinfomgt.2022.102544>
- Xu, J., Tang, X., Chang, E.-C., & Peng, H. (2024). Working with AI: The impact of organizational intelligent service strategy on employees’ perception of career achievement. *Humanities and Social Sciences Communications*, 11, 895. <https://doi.org/10.1057/s41599-024-03265-1>
- Yang, C. H. (2022). How artificial intelligence technology affects productivity and employment: Firm-level evidence from Taiwan. *Research Policy*, 51(6), 104536. <https://doi.org/10.1016/j.respol.2022.104536>
- Yorita, A., Egerton, S., Chan, C., & Kubota, N. (2023). Chatbots and robots: A framework for the self-management of occupational stress. *Robomech Journal*, 10(1), 24. <https://doi.org/10.1186/s40648-023-00261-z>