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Strategic implementation of positive health, safety and environmental culture in multinational and high-risk industries: A reflective case study

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Abstract

This case study looks at how a diverse and multinational company worked to shift its approach to health, safety, and environment (HSE). Rather than following a purely top-down or rule-based model, the effort focused on everyday realities like language barriers, cultural norms, and how people actually engage with HSE in practice (Fargnoli et al., 2020). Using critical realism and reflective methods, the study explored how safety is shaped by a mix of personal choices, organizational systems, and wider social factors (Bhaskar, 1975). Practical steps included creating clear HSE committees at every level, improving how safety messages were communicated across languages, and building emotional intelligence into leadership and training (Reason, 1997; Goleman, 1995). These changes helped staff take more ownership of HSE in a way that felt relevant and real. The study shows that lasting and sustainable change doesn't come from policies alone; it comes from listening, adapting, and building systems that fit the people they serve (Sayer, 1992; Douglas, 2010). For companies working across cultures and contexts, this approach offers a grounded and flexible path toward a stronger safety culture.

Keywords: Critical Realism; Organizational Culture; Multicultural Workforces; Emotional Intelligence; Leadership; Communication Barriers

1. Introduction

To build a robust positive health and safety culture in large multinational organizations is a challenging and urgent task in today's health, safety and environment (HSE) field. These challenges become even more complex when organizations operate across different cultures, languages, and regulatory systems. In such diverse workplaces, how employees see risk, follow safety rules, and understand compliance can vary greatly (Muselela et al., 2022a).

A strong safety culture is widely seen as key to protecting workers' well-being, reducing accidents, and helping organizations adapt to change (Zohar, 2016). However, creating this culture is more than just following international standards. It requires leaders to be actively involved, systems to work together smoothly, and safety programs that fit the needs of a diverse workforce (Imran, 2024).

This study took place in a setting marked by high-risk work such as road transport, warehousing, and handling materials. At the time of study, there were additional challenges like remote locations and employees who had different literacy and language skills (Fargnoli et al., 2020).

Drawing on the author's own experience, this case study looked closely at how a clear, well-planned approach helped improve HSE performance in a complex environment. The focus was on applying ISO standards, leadership-led

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governance, and behaviour-based safety (BBS) efforts. These were supported by training that respects cultural differences, communication in multiple languages, and using data to hold teams accountable across different sites.

While ISO standards provided a useful framework to align legal and operational needs, research shows that having a standard alone doesn't ensure it will take root in the culture or lead to real change (Santos-Reyes and Beard, 2017). Real progress comes from tailoring the approach to fit local contexts, getting people involved, and embedding safety in daily management (Allana and Clark, 2018).

This article aims to share both practical lessons and scholarly insights by combining hands-on experience with existing HSE research. It offers a model for organizations trying to transform safety culture in global workplaces with many different cultures. The goal is to add to the conversation about creating workplace safety approaches that are inclusive, flexible, and ethically sound (Douglas, 2010).

1.1. Problem statement

Although health, safety, and environment management systems like the two ISO standards have been widely adopted across industries, many multinational organizations still struggle to build and sustain a strong, consistent safety culture across their global operations. This challenge becomes even more difficult in labour-intensive, high-risk sectors such as logistics and distribution, including manufacturing, mineralization, and oil industries, where incidents often result from a mix of human factors, cultural disconnects, communication breakdowns, and differing regulatory demands across regions or jurisdictions (Muselela et al., 2022b).

The diversity of an organisation workforce adds another layer of complexity. With employees coming from different cultural and linguistic backgrounds and often with varying levels of education and familiarity with safety systems, it was challenging to standardize procedures or ensure that everyone shared the same understanding of risk and responsibility. In many cases, gaps in leadership engagement, limited employee involvement in safety efforts, and communication strategies that don't resonate across cultures have made it harder to create lasting cultural change (Allana and Clark, 2018).

While the importance of leadership, clear communication, and cultural sensitivity is well recognized in the literature (Imran, 2024), at the time of study, there was lack of practical, reflective research showing how these elements play out in the day-to-day operations of multinational companies. This case study responds to that gap by examining how one organization worked through these real-world challenges by shaping a more inclusive, participatory, and evidence-informed approach to building a resilient safety culture.

1.2. Purpose of the study

This study aimed to reflect on and critically explore how a large multinational company had worked to build a stronger, more positive health, safety and environment (HSE) culture. Led from the inside by a practitioner with first-hand experience, the research brings together real-world insight and evidence-based analysis.

The main goal was to understand and document how leadership models, behaviour-based safety initiatives, communication efforts, and culturally responsive practices contributed to real improvements in safety performance, particularly in a high-risk, dispersed, and highly diverse operational environment. With direct access to day-to-day processes, this study offers a grounded interpretation of how tools like ISO 45001:2018, behaviour-based safety (BBS), and multilingual stakeholder engagement were put into practice and what made them work (Hasle and Limborg, 2019).

More than just a case report, this research addresses a gap in the literature, such as the lack of reflective, practitioner-driven studies that show how safety culture transformation is actually implemented and sustained in multinational organisations (Zohar, 2016; Ghosh et al., 2021). Using a critical realist lens, the study also examined the structures, relationships, and contextual factors that supported change and sustainability (Bhaskar, 1975).

The lessons drawn from this case will enhance leadership, cultural inclusion, and systemic factors in other global industries to support this transformation. Beneficiary industries include healthcare, education, and commercial services, where cross-cultural safety challenges and leadership-led solutions are becoming more critical (Alkafh and Alonazi, 2024).

Significance of the study

This research is significant because it provides a practical, experience-based examination of how a complex organization developed a stronger safety culture in a high-risk, multinational setting. What sets this study apart is its grounding in real-world events, rather than abstract theory. It captures how leadership decisions, cultural dynamics, and operational pressures intersect to shape safety practices on the ground (Oliveira et al., 2022).

Multinational companies today face growing pressure to meet global safety standards while also managing the very real differences in language, culture, and regulation across the regions where they operate. This study doesn't just describe those challenges, it shows how one organization navigated them by adapting international frameworks such as ISO standards and implementing culturally responsive, behaviour-based safety strategies (Santos-Reyes and Beard, 2017; Hasle and Limborg, 2019). It provides an honest look at what worked, what didn't, and why.

The research also contributes to ongoing academic discussions about HSE, culture, and organizational change, especially by drawing from reflective, practice-based insights. It supports the view that safety improvement isn't just about compliance or systems, but it's about people. This includes the lived experience of workers, the role of supervisors, and how leadership influences behaviour and culture (Reason, 1997; Cooper, 2000; Lingard et al., 2020). Approaching this through a critical realist lens allowed the study to explore not only what happened but also what made it possible by examining the deeper structural and relational factors at play (Bhaskar, 1975).

Furthermore, this work may be useful to policy-makers and organizational leaders looking for grounded, adaptable models that move beyond one-size-fits-all solutions. The study demonstrates that real progress in workplace safety often depends on tailoring systems to the local context, and is especially relevant to fast-growing industries where cultural and linguistic diversity posit as a norm rather than the exception.

2. Theoretical framework

This study draws on a combination of three key models to make sense of how HSE culture takes shape and evolves in a large, complex, and culturally diverse organization: Cooper's Reciprocal Safety Culture Model (2000), Human Factors Analysis and Classification System (HFACS) Shappell and Wiegmann (2000), and Reason's Organizational Accident Model (1997). Each model offers a different angle, and together, they helped provide a fuller understanding of both individual and systemic factors that influence safety outcomes (Reason, 1997; Shappell and Wiegmann, 2000; Cooper, 2000).

2.1. Cooper's Reciprocal Safety Culture Model

Cooper's model sees safety culture as something that emerges from how people think, how they act, and the environment they work in. These three areas, namely psychological, behavioral, and situational, are closely linked (Cooper, 2000). For this study, that model helped frame how leadership behavior, training programs, and communication strategies worked together to improve safety. It also helped guide efforts to shift attitudes, encourage safe practices, and align policies with what actually happens on the ground. Other researchers, like Oliveira et al. (2022), have shown that Cooper's approach works well in multicultural environments, especially when safety initiatives are adapted to local norms and languages.

2.2. Reason's Organizational Accident Model

Reason's model added another layer to this. It focuses on how accidents often come from a mix of frontline errors and deeper issues within the system. For example, things like unclear procedures, weak oversight, or poor communication (Reason, 1997). This helped the study explore why certain safety gaps existed, such as breakdowns caused by language differences or inconsistent enforcement of rules. Using this model made it easier to identify hidden risks and plan interventions that addressed root causes rather than just surface-level problems. Recent studies, including Broderick et al. (2024), have shown the ongoing usefulness of this model in fast-growing or decentralized settings.

2.3. Human Factors Analysis and Classification System (HFACS)

HFACS was used to take a closer look at human error and behavior, especially in areas like driving safety and leadership engagement. Building on Reason's work, HFACS breaks down the causes of unsafe behavior into four levels: what people do, the conditions that influence those actions, how they're supervised, and the larger organizational structure (Shappell and Wiegmann, 2000). This helped structure several programs in the study, such as driver simulations, What is it for

me (WIIFM) workshops, and emotional intelligence training around a better understanding of how to support safer behavior in real-world settings.

Bringing these three frameworks together gave the study a practical and well-rounded foundation. It made it possible to look at both the everyday choices people make and the systems that shape those choices. This kind of layered understanding is especially important in organizations that span different countries, languages, and cultural norms. It also fits well with the critical realist perspective, which focuses on uncovering the real, often hidden and mechanisms that drive outcomes in complex social settings (Bhaskar, 1975).

Therefore, this integrated framework made it possible to study the organization's HSE culture from multiple angles. It showed how individual responsibility and organizational design interact, and why both matter if safety improvements are going to last especially in fast-paced, high-risk, and diverse environments.

3. Methodological approach

This study takes a reflective, practitioner-led single-case study approach rooted in qualitative, interpretive methods and framed by Critical Realism (Muselela, 2025). Being embedded within the organization gave the researcher direct access to insider knowledge and a deeper understanding of how safety culture really works on the ground, and the insights often overlooked by purely quantitative or outsider-led studies.

The philosophical base of Critical Realism (Bhaskar, 1975) allowed the study to look not only at what can be observed, i.e. safety outcomes, but also at the underlying causes and organizational conditions that shape those outcomes by drawing on practical experience through a hands-on engagement with safety culture change. This view recognizes that reality exists independently and that our understanding of it is influenced by language, culture, and social context. This fits well with interpretive phenomenology, which helps explore how people experience and make sense of their work life. Together, these perspectives allow for both grounded investigation and deeper explanation, as seen in recent practitioner-led safety and healthcare research (Waring et al., 2020; Singh et al., 2022).

Reflective practices such as journaling, informal discussions, and cross-checking sources helped maintain a balanced and transparent view throughout the study (Watkins, 2017). The study used a single-case embedded design (Yin, 2018), enabling a broad approach while focusing on key areas such as safety teams, leadership groups, and branch (local/site) operations.

Data was gathered purposively from sources directly relevant to safety improvements in this diverse, high-risk environment. This included practitioner journals, training guides, safety messages, governance documents, meeting notes, and performance reports. Informal interviews and observations added further depth. The RADaR technique (Watkins, 2017) was used to organize and simplify this rich data.

The analysis was guided by three linked frameworks

- Cooper's Reciprocal Safety Culture Model, which explores how attitudes, behaviors, and organizational systems influence each other;
- Reason's Organizational Accident Model, highlighting hidden organizational weaknesses behind accidents; and
- The Human Factors Analysis and Classification System (HFACS), which breaks down human and organizational factors in incidents.

These models were not strict codes but practical tools to help connect what was happening day-to-day with the larger system dynamics behind HSE, therefore, thematic analysis (Braun and Clarke, 2006) was applied with a critical realist mindset, using a back-and-forth process between themes that emerged naturally and those linked to theory. Key themes included leadership emotional intelligence, accountability systems, cultural adaptations in communication, participatory training, and shared responsibility for safety outcomes.

Ethical standards were fully respected. All data was anonymized, and no individual employee records were accessed. Participation in reflective activities was voluntary, with verbal consent obtained when needed; therefore, findings were reported as the group or thematic levels to protect confidentiality.

4. Presentation of Findings

Using a critical realist lens (Bhaskar, 1975), five interrelated themes emerged from interviews, observations, and document analysis. These themes represent participants' perceptions and experiences, highlighting generative mechanisms within the organization's safety culture.

4.1. Leadership Engagement and Perceived Cultural Shifts

"When senior management attends safety meetings, everyone takes it seriously. It shows that safety is not just paperwork," stated an employee.

Participants consistently emphasized the influence of leadership behaviour on safety culture. Leadership was not viewed as symbolic; rather, participants interpreted executive engagement, such as site visits, leadership-led strategy sessions, and performance-linked safety targets, as shaping workplace priorities.

Another employee observed

"Now that safety KPIs are part of the manager's scorecard. That's when we saw things changed because it affects their appraisal."

"The safety committees have changed how we work," one employee explained. *"We now have scheduled meetings with proper follow-ups and safety inspections, and with the dashboard, we can easily see who's performance. It is all there for everyone to see."* Participants spoke about how safety committees became more active over time.

These patterns suggest that visible, structured leadership engagement acted as a causal mechanism, reinforcing safety ownership at all levels (Cooper, 2000; Reason, 1997; Singh et al., 2022; Waring et al., 2020).

4.2. Communication Challenges and Multilingual Strategies

Communication was a recurring concern, especially in a workforce composed of multiple nationalities. *"They don't really read English or Arabic. When pictures are used, employees get it straight away,"* said one employee.

A few others shared similar frustrations. One mentioned, *"We were giving instructions, but it was like talking into the wind. They just nodded, didn't really understand."*

Someone from workshop added, *"You've got guys from Nepal, Sudan, Bangladesh, all in one crew. There's no single language that works. We had to find another way."*

Managers found that using a single language for communication didn't work across the board. As one supervisor put it, *"There's no one language that fits everyone here—we had to adapt."*

Instead, the company started using a mix of approaches—short safety talks in different languages, posters with visuals, and group briefings that didn't rely on reading. According to one manager, *"We started translating key messages into Hindi and Tagalog, and added more images to the posters so everyone could follow."* Interviewees referred to translated materials, visuals, and person-centered briefings.

"We now give safety talks in Hindi and Tagalog too. The message is more direct when someone hears it in their language," noted a health and safety coordinator.

Several frontline staff mentioned the role of interpreters and bilingual trainers during safety induction and refresher courses. This inclusiveness, they said, reduced confusion and built trust.

These findings point toward inclusive communication practices as a mechanism of equitable safety engagement, especially where literacy and language posed structural barriers (Alkahf and Alonazi, 2024; Kim et al., 2019).

4.3. Perceptions of Behavioural Safety Approaches

Participants described the organization's behavioural safety efforts as particularly impactful when linked to personal consequences and cultural sensitivities.

"They showed a video and pictures where someone who died and another who lost a hand. That hit hard. It wasn't just rules, it was real," said a driver and machine operator who works in the workshop.

The "What's In It for Me?" campaign targeted supervisors and team leads, encouraging them to internalize safety as a personal and collective responsibility.

"If my team gets injured, it's on me. That's how I started seeing it," commented a supervisor.

Simulators, emotional intelligence workshops, and culturally adapted risk assessments were frequently cited as tools that helped individuals reflect on their actions and decision-making processes.

Behavior-focused models such as Reason's (1997) Organizational Accident Model and the HFACS framework were reflected in training and post-incident analysis, though rarely named directly by participants. Instead of blaming individuals, the team started looking at the bigger picture. As one investigator (a line manager) put it, *"We stopped asking who made the mistake and started asking why the system allowed it."*

Tools like HFACS and Reason's model helped frame incidents differently. A safety manager explained, *"It showed us that the problem wasn't just the driver or the worker, it was how things were set up."* That shift helped people take shared responsibility rather than point fingers.

4.4. Internal-External Collaborations and Stakeholder Influence

"We didn't do it alone. Corporate team, Civil defense, and transport authorities helped us improve our standards," stated the location in charge.

Stakeholder collaboration was cited as central to enhancing safety performance. Internally, departments such as operations support functions and operations aligned safety targets and co-managed incidents.

"Now, we don't just report to safety. Support functions check training records, near-misses, and employee rest days, it's shared," said a workshop manager.

Externally, strategic partnerships brought expertise and credibility. Interviewees mentioned improved training content, inspections, and certification standards introduced by third-party experts.

Stakeholder mapping was also discussed, particularly by mid-level managers, who used it to prioritize engagement.

A senior safety personnel put it plainly: *"We couldn't have done it alone. Getting support operations, even civil defense, involved to support with activities such as fire drills in raising awareness made a huge difference."*

Others echoed that bringing different departments together helped them tackle problems more quickly and with fewer silos. As one team leader said, *"Before, everyone had their own agenda. Now we sit down together, share updates, and follow through."*

Working with outside partners, such as First Aid trainers and local safety authorities, also introduced ideas and tools that the internal team hadn't used before. These relationships helped the company stay compliant, but more than that, they helped build momentum.

4.5. Experienced Barriers and Adaptive Responses

Despite progress, participants acknowledged persistent challenges. Language gaps, cultural resistance, and environmental factors (like heat or religious routines) disrupted uniform implementation.

"During religious times. People get tired quicker, and it's harder to keep routines," noted a safety personnel and a driver.

Visual job aids, adjusted work schedules, and interpreter support were among the measures introduced to mitigate these challenges.

"We brought in lane sensors, technology helps where people forget or do off while driving due to fatigue, especially in long-haul drivers," commented a technical officer.

Crucially, participants highlighted flexibility, not rigidity, as key to implementation. Instead of enforcing a one-size-fits-all model, solutions were tailored to local needs and constraints.

This theme illustrates how context-sensitive adaptations acted as resilience mechanisms, allowing the HSE system to withstand operational and cultural pressures (Imran, 2024).

5. Discussion of Findings

The five themes presented in the findings section offer insight into how HSE culture is constructed, navigated, and reshaped within a complex multinational setting. When viewed together through a critical realist lens (Bhaskar, 1975), these themes point to a layered network of causal mechanisms that sit beneath observable workplace behaviour. Rather than isolating each element, this discussion considers how they interact to shape HSE practice in everyday contexts.

5.1. Leadership Engagement and Perceived Cultural Shifts

Across all interviews and observations, leadership emerged as a key cultural driver. But leadership alone was not a sufficient condition; it became a generative mechanism only when visibly practiced and structurally reinforced. The organization's commitment to HSE, communicated through direct involvement by top executives, formal committee structures, and digital accountability tools, created a climate where HSE was treated as non-negotiable. This is consistent with Reason's (1997) argument that organizational systems, not just individual choices, create the conditions for safety or failure.

5.2. Communication Challenges and Multilingual Strategies

Yet leadership was repeatedly refracted through language, culture, and social identity, revealing another deep layer. Many participants pointed to challenges in communication, not just in terms of literal translation, but in how messages were interpreted by a multilingual, multi-literate workforce. The act of communicating HSE effectively became a mechanism in itself, shaping who felt included, who understood the rules, and who could act safely. The human-centered, adaptive approach to communication described by participants points to the real structures of inequality and access, as described by Sayer (1992), that must be navigated if HSE is to be collective and not selective.

5.3. Perceptions of Behavioural Safety Approaches

The organization's behaviour-focused interventions reflected a shift from viewing risk as something individual workers manage to seeing it as relational and systemic. Campaigns like "What's In It For Me?" encouraged workers to think beyond compliance and toward self-preservation, but more importantly, training tools such as HFACS and Reason's model gave both workers and managers a framework to explore why things went wrong without defaulting to blame. These tools supported reflexivity (Archer, 1995), allowing individuals to recognize how they were shaped by and could shape the systems they worked within.

5.4. Internal-External Collaborations and Stakeholder Influence

Equally important were the collaborative dynamics observed internally and externally. Departments that had once operated in silos began working together toward shared HSE goals, and partnerships with outside experts and authorities brought legitimacy and fresh insight. These alliances didn't just provide resources, they revealed how collective effort can act as a structural enabler, breaking down institutional inertia (Eastwood et al., 2016). Such findings echo Allana and Clark (2018), who emphasize the importance of meta-level coordination in making systemic change possible within complex organizations.

5.5. Experienced Barriers and Adaptive Responses

Finally, the organization's response to persistent challenges, especially cultural resistance, environmental stressors, and operational pressures, demonstrated a form of situated resilience. Instead of sticking to one set of rules for everyone, the company made adjustments when things got tough. During the hottest months, shifts were moved earlier to avoid the midday heat. Interpreters or the use of multilingual was promoted when it was clear some workers couldn't follow HSE briefings. In places where people tended to slip up, like long highway drives, they added lane sensors to vehicles, and for tasks that involved driving and manual handling on long routes, two drivers were introduced to share driving to take some of the pressure off the drivers. These were not just interventions; they were expressions of an underlying generative mechanism, pragmatic flexibility, that allowed the HSE system to survive real-world stress (Douglas, 2010).

Together, these themes support the argument that safety culture is not a fixed attribute but an emergent property of interacting social, organizational, and material systems. They confirm Bhaskar's (1975) premise that reality operates on multiple levels: what is seen, what is done, and what enables or constrains those actions, often without being visible at all. In this case, what appeared as visible improvements in HSE behaviour were underpinned by less visible shifts in leadership practice, communication equity, reflexivity, collaborative structure, and adaptive response mechanisms.

6. Implications for Practice and Policy

6.1. Leaders Shape Culture by Being Present

Safety culture doesn't take root through memos or mission statements; it develops when leaders consistently show up and lead by example. Senior managers must not only set expectations but actively engage with frontline teams: visiting sites, participating in HSE huddles, and responding visibly to concerns. When leaders are regularly seen engaging with HSE matters, it shows that HSE is not just another target on a dashboard, but that it matters to everyone. That kind of visibility builds trust and signals to workers that their efforts are valued, making them more likely to take safety seriously and act on it themselves. When leaders are seen responding to incidents with empathy and clarity, it sets a tone that HSE is everyone's concern, not just a checklist item (Singh et al., 2022; Cooper, 2000).

6.2. Speak to People in a Way That Feels Real

In multicultural, multilingual workplaces, communication must do more than inform; it must connect. Too often, HSE messages fail not because the content is wrong, but because the delivery overlooks how people truly understand and absorb information. Speaking in workers' preferred languages, using visuals or demonstrations, and involving interpreters or bilingual staff members makes communication feel relevant and respectful. It also reinforces psychological safety, where workers feel seen and valued. This approach acknowledges that language isn't just a barrier, it's a bridge to inclusion, understanding, and trust (Lingard et al., 2020; Kim et al., 2019).

6.3. Shifts from Rules to Relationships

Traditional safety training often focuses heavily on compliance, what rules and norms exist and what happens if they are broken. But rules alone rarely change behavior as workers are likely to adopt safe practices when safety is framed around relationships and values. Campaigns that speak to personal motivations, like family, pride in work, or protecting teammates, tend to resonate more deeply. Involving supervisors and team leaders as role models also makes HSE messages stick, especially when they are grounded in real-life examples. Building these relational bonds transforms HSE from an obligation into a shared responsibility (Reason, 1997).

6.4. Build Reflection into Everyday Practice

Learning doesn't only happen in formal reviews or after major incidents; it happens in the everyday moments when people pause, think, and ask, "What could we have done differently?" Encouraging this type of micro-reflection during toolbox talks, shift changes, or casual debriefs helps uncover subtle risks before they become serious. Activities like journaling, peer feedback, or walk-through discussions allow safety practices to evolve continuously. When reflection is embedded into daily routines, teams become more adaptable and proactive. Over time, this fosters a learning culture where insights are shared, not silenced (Watkins, 2017; Archer, 1995).

6.5. Policies Should Reflect Real Workplaces

Global HSE standards are useful, but only when they align with the realities of the workplace. In high-heat environments, during religious activities, or across different cultural norms, rigid policies can quickly become impractical or even unsafe. Organizations must be willing to interpret and adapt these policies so they remain meaningful to frontline workers. That might mean adjusting PPE requirements during extreme temperatures, scheduling differently during religious activities that demand personal commitment, i.e., fasting periods, or offering flexible training methods. A policy that reflects the lived experience of workers is far more likely to be followed and respected (Muselela et al., 2023).

6.6. Train HSE Leaders for Today's Workforce

In many workplaces today, HSE officers find themselves doing far more than enforcing rules. They often act as go-betweens, helping teams navigate cultural differences, manage stress, and respond to difficult situations. To do this well, they need more than technical training. Skills like emotional awareness, the ability to read a room, and knowing how to defuse conflict are just as important. These human qualities help build trust, encourage open communication, and support safer decisions on the ground. Real-world case scenarios, role play, and reflective practice should be integral to

development programs. When HSE leaders are equipped to connect with people, especially in diverse teams, they can create environments where workers feel supported, not policed (Waring et al., 2020; Singh et al., 2022).

6.7. Use Technology to Bridge Language and Literacy Gaps

The use of digital tools can play a profound role in making safety accessible to everyone. Translation apps, voice-to-text instructions, interactive training modules, and pictorial safety signs help overcome barriers posed by limited literacy or unfamiliar languages. More than convenience, these technologies create equity, ensuring that no one is excluded from understanding life-saving information. For example, site-specific induction videos in multiple languages or real-time alerts in workers' preferred languages help ensure the message isn't just delivered, it's received. When used thoughtfully, technology becomes a tool for connection and inclusion (Cockerham, 2019; Waring et al., 2020).

7. Conclusion

This study shows how safety culture grows and changes in a busy workplace with many cultures. Real safety progress didn't come from just following rules or checking boxes. Instead, it happened through day-to-day effort, leaders showing up, clear communication, teamwork, and everyone learning and adjusting as they go.

Leadership mattered most when it was visible and present, not just at the top, but across all levels, where senior managers engaged directly with teams, used data to guide decisions, and responded to concerns. Communication succeeded when HSE messages were translated beyond words into images, briefings, and culturally relevant formats that workers could trust and use. Behavioural programs worked best when they spoke to personal values and experiences, moving away from strict rules toward building relationships and shared responsibility.

Collaboration inside the organization and with external partners broke down silos and brought fresh perspectives, creating a stronger safety ecosystem. In the end, the company showed it could roll with the punches, changing work hours to beat the heat, bringing in interpreters when needed, and adding technology to help workers out. These practical changes made a big difference when things got tough.

Theoretical Contribution

This research advances critical realist perspectives by demonstrating how safety culture emerges through interacting generative mechanisms at multiple levels. It shows how leadership visibility, communication equity, reflexivity, collaborative structures, and pragmatic flexibility combine to shape safety outcomes, not as static traits, but as dynamic, context-sensitive processes.

This study draws on detailed real-world data from a multinational workplace to bring immense philosophies, like Bhaskar's layered reality and Archer's focus on reflection, down to everyday HSE challenges. By combining critical realism with an approach that values people's lived experience, it helps explain how both systems and personal stories shape safety culture.

This way of looking at things can help researchers and HSE professionals create solutions that really work, ones that understand the many social and organizational factors involved and lead to lasting and sustainable improvements.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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