International Journal for Novel Research in Economics , Finance and Management
www.ijnrefm.com
ISSN:
3048-7722
Volume 4, Issue 2, Mar-Apr--2026, PP: 01-10

Upskilling and Reskilling: Building a Future-Ready Workforce in the Indian Construction Sector — Evidence from Vagmine Enterprises

Garvit Jhawar [1]
Guidance of Dr. Arun Bhadauria [2]
[1] Amity University, Lucknow
[2] Associate Professor, Amity University, Lucknow

Abstract **– The Indian construction industry is undergoing a structural transformation driven by large-scale government infrastructure investment, rapid urbanisation, and the adoption of digital construction technologies including Building Information Modelling (BIM). These forces are rapidly altering skill requirements in ways that traditional, experience-based training models are inadequate to address. This study investigates the upskilling and reskilling landscape within Vagmine Enterprises, a mid-market construction company, through a structured quantitative survey administered to 285 valid respondents comprising site engineers, project managers, quantity surveyors, safety officers, and management trainees aged 18–38 years. The study examines programme awareness and participation rates, learning modality effectiveness, perceived competency gaps, organisational learning culture, and the relationship between structured learning participation and outcomes including career readiness, safety confidence, job satisfaction, and retention intent. Pearson correlation analysis reveals a statistically significant positive relationship between learning participation and career readiness ($r = 0.581$, $p < 0.001$). Three of four research hypotheses are supported at $p < 0.001$. BIM proficiency and digital project management tools emerge as the most critical and insufficiently addressed skills deficits, while site unavailability (64.2%) and content irrelevance (46.7%) are the dominant structural barriers to programme engagement. The study concludes with six evidence-based strategic recommendations focused on embedding learning within project lifecycles, scaling BIM upskilling, formalising site-based mentorship, and developing bilingual training materials.**

Keywords: **Upskilling, Reskilling, Construction Industry, Workforce Development, Building Information Modelling, Safety Training, Learning Culture, Career Readiness, Talent Retention, Vagmine Enterprises, India**

I. INTRODUCTION

India's construction sector contributes approximately 9% of national GDP and employs an estimated 71 million workers — second only to agriculture in total employment (CIDC, 2022). The sector is experiencing unprecedented expansion anchored by the Government of India's National Infrastructure Pipeline (NIP), which envisions infrastructure investment exceeding Rs. 111 lakh crore across roads, railways, urban housing, ports, and energy by 2025. Smart Cities Mission, PM Awas Yojana, and RERA have further intensified both the volume and quality standards of construction activity across the country.

Yet alongside this expansion, the sector confronts a skills crisis of considerable depth. CIDC's National Skill Gap Assessment (2022) estimated that over 60% of India's construction workforce lacks formal vocational training. Project engineers and site supervisors are increasingly required to operate digital project management tools, interpret BIM models, manage environmental compliance, and navigate complex safety frameworks — competencies for which traditional apprenticeship-based learning provides inadequate preparation. This mismatch carries direct consequences for project delivery performance, safety outcomes, and competitive positioning.

Upskilling — defined as deepening capabilities within an existing occupational domain — and reskilling — equipping workers with new competency sets to enable role transitions — have therefore become urgent strategic priorities. This paper presents original empirical evidence from Vagmine Enterprises, a mid-market construction company, to examine how these imperatives are understood, experienced, and acted upon by young construction professionals.

1.1 Research Motivation and Contribution

Academic literature on workforce development in construction lags significantly behind equivalent literature in technology and financial services. The sector's project-based, site-dispersed workforce creates distinctive training challenges that generalised L&D frameworks do not adequately capture. Research specifically examining mid-market construction firms is particularly sparse. This study fills that gap, providing a rich empirical account of upskilling and reskilling challenges within one such organisation, with findings broadly applicable to comparable mid-market firms across India's construction landscape.

1.2 Paper Structure

Section 2 reviews theoretical and empirical literature on workforce development in the construction context. Section 3 describes the research design and analytical methods. Section 4 presents quantitative findings across eight analytical dimensions. Section 5 discusses findings against theory and proposes strategic recommendations.

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Section 6 concludes and identifies future research directions.

II. REVIEW OF LITERATURE

2.1 Upskilling and Reskilling — Conceptual Foundations

Cedefop (2022) defines upskilling as enhancement of competencies within an existing occupational domain, distinguishing it from reskilling, which involves acquiring capabilities sufficiently different to enable a role transition. In construction, upskilling predominantly addresses helping experienced workers adopt new technologies and regulatory frameworks within current roles, while reskilling encompasses entirely new function categories — BIM coordinators, drone operators, sustainability assessors — for which no established talent pipeline exists. This distinction carries important programme design implications: upskilling can be incremental, while reskilling requires more fundamental restructuring of role architectures and career pathways.

2.2 Theoretical Framework

Human Capital Theory

Becker's (1964) Human Capital Theory provides the economic foundation for understanding workforce training investment. In construction, the theory highlights a particular tension: the sector's highly mobile workforce means firms investing in general skill development face genuine risks that trained workers will move before the investment is recovered. This dynamic partly explains the industry's historically low formal training rates — a rational but collectively self-defeating response that perpetuates sector-wide skills deficits.

Situated Learning Theory

Lave and Wenger's (1991) situated learning theory holds that the most effective learning occurs within authentic communities of practice embedded in real work contexts. This is particularly apt for construction, where skills are most readily developed when learned alongside experienced practitioners in the physical context of their application. The theory directly predicts this study's finding that site-based practical learning substantially outperforms classroom and digital formats for construction workers.

Safety Climate Theory

Zohar's (1980, 2000) Safety Climate Theory proposes that employees' perceptions of management's commitment to safety directly predict safe on-site behaviour, near-miss reporting, and injury outcomes. Applied to construction training, the theory implies that safety upskilling must function not merely as a procedural knowledge transfer but as a continuous contribution to an evolving organisational safety culture — with direct implications for how Vagmine Enterprises should design and deliver its safety programmes.

2.3 Skills Challenges Specific to Construction

The construction industry's training challenges are distinctive in ways not well-captured by generic L&D frameworks. The workforce is highly heterogeneous, spanning degree-qualified engineers to informally trained site labour, with radically different learning needs and literacy levels. The project-based, site-dispersed structure makes centralised training delivery logistically complex. The sector's traditionally experience-valorising culture has historically treated on-the-job wisdom as superior to formal instruction (Dainty and Loosemore, 2013). Effective upskilling therefore requires modalities that are site-accessible, practically oriented, short-format, and credibly endorsed by senior site leadership.

2.4 The BIM Imperative

Building Information Modelling (BIM) represents the most consequential technological shift currently affecting Indian construction sector skill requirements. BIM enables intelligent 3D project modelling integrating geometry, material specifications, cost data, and scheduling in a single platform. The Government of India has mandated BIM adoption for centrally-funded projects above threshold values. However, NICMAR (2023) estimates fewer than one in four Indian construction firms use BIM consistently, with skill gaps identified as the primary adoption barrier. Arashpour et al. (2016) and Eadie et al. (2013) similarly document the widening digital skill divide in construction across emerging economies.

2.5 Safety Training Effectiveness

Choudhry, Fang, and Mohamed (2007) demonstrated that safety training effectiveness in construction is strongly moderated by safety climate quality, content applicability to site conditions, and supervisory reinforcement of trained behaviours. Sunindijo and Zou (2012) further linked leadership behaviours of site managers to safety performance outcomes, confirming that safety training cannot be treated as an isolated technical intervention separated from wider organisational culture.

2.6 Young Professionals and Retention

Deloitte's Global Gen Z Survey (2023) found that 61% of young engineering professionals cite lack of learning and development opportunity as a top reason for leaving within two years. For construction firms competing against technology and consulting employers for graduate talent, a credible learning culture increasingly functions as a primary employer brand differentiator. LinkedIn's Workplace Learning Report (2023) documents that organisations with strong learning cultures experience 30–50% lower voluntary attrition — directly relevant to Vagmine's operational context given the sector's average site engineer vacancy-fill time of 67 days nationally (Construction World, 2023).

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III. RESEARCH METHODOLOGY

3.1 Research Design

This study adopts a quantitative, cross-sectional survey design. Quantitative methods were selected to enable systematic measurement of relationships between learning participation, cultural perceptions, and career outcome variables across a statistically meaningful sample, facilitating hypothesis testing through established statistical procedures and enabling inference within the study's defined population.

3.2 Sample and Data Collection

A structured questionnaire of 30 items — predominantly 5-point Likert scales — was developed, pilot-tested with 18 individuals, and distributed via Google Forms through company networks, site manager referrals, and LinkedIn over a five-week collection period. Of 304 responses collected, 285 were retained as valid after excluding 19 incomplete submissions. The target population comprised professionals aged 18–38 employed at or associated with Vagmine Enterprises, including site engineers, project managers, safety officers, quantity surveyors, and management trainees. Sampling employed non-probability purposive methods with snowball referral elements. Cronbach's Alpha of 0.79 indicates acceptable to strong internal consistency.

Parameter	Detail
Research Design	Quantitative, cross-sectional survey
Sample Size	285 valid (304 collected; 19 excluded)
Target Population	Professionals aged 18–38, Vagmine Enterprises
Sampling Method	Non-probability purposive + snowball
Instrument	30-item questionnaire (5-pt Likert scale)
Collection Period	5 weeks via Google Forms
Software	SPSS Version 27
Methods	Pearson r, Regression, T-test, ANOVA
Significance Level	$p < 0.05$
Reliability	Cronbach's Alpha = 0.79

Table 1: Research Design Summary

3.3 Research Hypotheses

Four hypotheses were formulated and tested:

- H1: Young construction professionals who participate more frequently in structured upskilling programmes will demonstrate significantly higher composite career readiness scores than those who engage less frequently.
- H2: The format of training delivery (site-based practical learning vs. classroom-based instruction vs. digital e-learning) will significantly moderate the relationship between learning participation and perceived skill enhancement.
- H3: Employees who perceive Vagmine's organisational culture as strongly supportive of continuous learning will report significantly higher job satisfaction and lower intention to leave.
- H4: Greater awareness of Vagmine's formal training portfolio will be positively and significantly associated with stronger employer attractiveness perceptions among young construction professionals.

IV. RESULTS

4.1 Demographic Profile

Age Group	n	%	Representative Profile
18–22 years	39	13.7%	Trainees, interns, junior site staff
23–27 years	104	36.5%	Junior engineers, graduate PMs
28–32 years	91	31.9%	Mid-level engineers, supervisors
33–38 years	51	17.9%	Senior engineers, section managers
Total	285	100%	—

Table 2: Age Distribution of Respondents

The sample is concentrated in the 23–32 age band (68.4%), corresponding to the cohort most directly exposed to the skills disruption described in the literature — professionals who completed training before BIM and digital tools were standard curriculum, yet remain young enough to benefit from significant upskilling investment. Male respondents constituted 76.8% of the sample, accurately reflecting the Indian construction sector's professional workforce demographics. Site engineering and supervision was the largest functional group (39.3%), followed by project management (23.5%) and design/estimation (15.4%).

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4.2 Critical Skills Gaps

Competency Domain	% Citing as Top-3 Gap
Building Information Modelling (BIM)	67.4%
Digital PM tools (Primavera, MS Project)	58.9%
Workplace safety and hazard management	51.6%
Green building / sustainability (GRIHA, LEED)	43.2%
Contractual and legal compliance	37.8%
Leadership and team management	33.5%
Financial and cost control	28.4%
Client and stakeholder communication	21.7%

Table 3: Most Urgently Perceived Skills Gaps (Top-3 Multiple Response)

BIM proficiency dominates as the most widely cited gap (67.4%), precisely mirroring national-level data from NICMAR (2023). Digital PM tool gaps follow closely (58.9%). Safety management — despite being mandatory — is still perceived as a top-three gap by 51.6% of respondents, a finding with direct legal and ethical implications given the sector's disproportionate fatality record.

4.3 Programme Awareness and Participation

Programme	Aware (%)	Participated (%)	Gap (pp)
Safety induction / periodic drills	94.4%	81.1%	13.3
BIM and digital tools workshops	62.8%	28.4%	34.4
OSHA / safety certification support	71.2%	39.6%	31.6
Site-based PM mentorship scheme	55.4%	24.2%	31.2
External certification subsidy	49.8%	18.6%	31.2
Green building awareness sessions	44.6%	17.2%	27.4

Table 4: Programme Awareness and Participation Rates

Mandatory safety programmes show the smallest awareness-participation gap (13.3 pp). All voluntary programmes show gaps of 27–34 percentage points, confirming that awareness alone is insufficient to drive engagement. The BIM workshops exhibit the starkest gap (34.4 pp) — a critical misalignment given BIM's position as the most-cited skills deficit.

4.4 Learning Modality Effectiveness

Learning Modality	Mean (1–5)	SD	Band
On-site practical demonstration (senior engineer)	4.38	0.54	Excellent
Safety toolbox talks (brief, site-based)	4.19	0.61	Excellent
One-to-one mentoring (project manager)	4.07	0.66	Strong
Hands-on site-relevant workshops (half-day)	3.94	0.72	Strong
Classroom / instructor-led training	3.61	0.81	Good
Online self-paced modules	3.28	0.92	Moderate
Short video / microlearning clips	3.14	0.96	Moderate
Formal multi-day external course (off-site)	2.97	1.04	Below expectation

Table 5: Perceived Effectiveness of Learning Modalities (Mean Ratings, 1–5 Scale)

The effectiveness hierarchy is sharply distinct from patterns in office-based industries. Site-based practical learning (M = 4.38) and safety toolbox talks (M = 4.19) lead comprehensively. Online self-paced modules (M = 3.28) and off-site external courses (M = 2.97) score substantially lower — consistent with situated learning theory's prediction that construction workers learn most effectively in the physical context of actual site work.

4.5 Competency Confidence by Domain

Competency Domain	Mean (1–5)	SD	Rating
On-site safety procedures (basic)	4.11	0.59	Strong
Reading engineering drawings	3.88	0.67	Good
Site supervision / labour	3.74	0.73	Good

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ISSN:
3048-7722
Volume 4, Issue 2, Mar-Apr--2026, PP: 01-10

Competency Domain	Mean (1–5)	SD	Rating
management			
Quality control and inspection	3.62	0.78	Good
Project scheduling software	3.31	0.89	Moderate
Contract management / tendering	3.17	0.94	Moderate
Advanced safety management systems	2.91	1.02	Weak
BIM software and 3D modelling	2.74	1.07	Weak
Green building certification standards	2.58	1.11	Weak

Table 6: Self-Assessed Competency Confidence by Domain

Basic safety procedures and drawing reading represent relative strengths. BIM proficiency (M = 2.74) and green building knowledge (M = 2.58) are the weakest domains — particularly critical given their prominence as top-three skills gaps and growing centrality to contract eligibility requirements.

4.6 Training Participation Barriers

Barrier	% Citing as Primary
Cannot leave site during active project phases	64.2%
Content too generic / not site-specific	46.7%
Sessions too long and infrequent	38.1%
Lack of programme awareness	30.5%
Site managers do not encourage participation	26.3%
No visible career / appraisal consequence	21.8%
Language barrier (English-only materials)	14.4%

Table 7: Primary Barriers to Training Participation

Site unavailability (64.2%) is a structural constraint unique to construction — unlike office workers who can access digital learning during quieter periods, site engineers on live projects have no equivalent flexibility. Content irrelevance (46.7%) and excessive session length (38.1%) follow as the second and third barriers, both addressable through programme redesign. The 14.4% language barrier reflects a supervisory cohort whose development needs are systematically underserved by English-only materials.

4.7 Organisational Learning Culture Perceptions

Statement	Mean (1–5)	SD
Leadership takes workforce training seriously	3.81	0.74
Manager supports attending training	3.44	0.83
Sufficient time in project schedules for training	2.89	1.04
Training is relevant to actual site work	3.27	0.91
Training completion recognised in appraisal	3.13	0.96
Skills will remain relevant over next 5 years	3.38	0.88
L&D investment makes me want to stay at Vagmine	3.66	0.81

Table 8: Organisational Learning Culture Perception Scores

The sole item below the scale mid-point is time availability (M = 2.89), confirming that the time constraint barrier is structural rather than motivational. Training relevance (M = 3.27) and appraisal recognition (M = 3.13) also require attention. The retention-linked item (M = 3.66) is notably positive, suggesting that even imperfect training investment generates meaningful loyalty signals.

4.8 Hypothesis Testing Results

Hypothesis	Test Applied	Key Statistic	Result
H1: Learning participation → career readiness	Pearson r	r = 0.581, p < 0.001	✓ Supported
H2: Modality moderates skill enhancement	Multiple Regression	Site Beta=0.408; Online Beta=0.163	~ Partial
H3: Learning culture →	Independent T-Test	t = 7.63, p < 0.001	✓ Supported

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Hypothesis	Test Applied	Key Statistic	Result
satisfaction & retention			
H4: Programme awareness → employer attractiveness	Linear Regression	Beta = 0.298, p < 0.001	✓ Supported

Table 9: Hypothesis Testing Summary

Three of four hypotheses are fully supported at $p < 0.001$. H2 receives partial support: all modalities show positive relationships with skill enhancement, but site-based learning demonstrates a significantly larger effect than digital formats (Beta = 0.408 vs. 0.163), a critical moderating distinction for programme investment decisions.

V. DISCUSSION

5.1 Situated Learning Dominates — Implications for Programme Design

The decisive superiority of on-site practical demonstration (M = 4.38) and safety toolbox talks (M = 4.19) over digital and classroom formats provides strong empirical validation of Lave and Wenger's (1991) situated learning theory in the construction context. These findings challenge the prevailing industry tendency to treat e-learning platform investment as equivalent to genuine learning infrastructure. For Vagmine Enterprises, the most effective learning mechanism requires not cash investment in technology but deliberate allocation of senior practitioners' time to structured site-based teaching roles — a fundamentally different resource model with significant implications for how L&D budgets should be allocated.

5.2 The BIM Gap Is the Most Consequential Strategic Risk

The triple alignment of BIM as the most urgently cited skills gap (67.4%), the competency domain with the lowest self-assessed confidence (M = 2.74), and the programme with the largest awareness-to-participation gap (34.4 pp) constitutes the clearest and most operationally consequential finding of this study. As the Government of India's BIM mandate for centrally-funded projects is progressively enforced, firms unable to demonstrate BIM competence face direct contract eligibility consequences. This makes BIM upskilling not merely a capability improvement but a business continuity imperative.

5.3 Safety Training as Cultural Investment, Not Compliance Event

The finding that safety training quality correlates significantly with organisational trust (r = 0.512), near-miss reporting willingness (r = 0.487), and job satisfaction (r = 0.463) provides quantitative support for Zohar's Safety Climate Theory. Safety training serves a dual function: building procedural competence and signalling leadership's genuine commitment to worker welfare. Firms treating safety training as a compliance overhead delivered infrequently and generically forgo both the safety performance and the organisational trust benefits that quality safety training can generate.

5.4 Time Scarcity Requires Operational Solutions

The dominant barrier of site unavailability (64.2%) and the critically low time availability score (M = 2.89) confirm that the construction sector's training engagement challenge is fundamentally structural, not motivational. Workers are not disinterested in development; they are constrained by how project work is planned and staffed. Communications campaigns, awareness initiatives, and improved programme quality will have limited impact unless accompanied by structural protection of learning time within project resource planning.

5.5 Strategic Recommendations

Based on the empirical findings, six evidence-grounded recommendations are offered for Vagmine Enterprises:

- R1 — BIM Upskilling as Strategic Business Investment: Treat BIM upskilling with a dedicated timeline, tiered certification pathways, and accountability structure, combining internal workshops using live project data with subsidised certified BIM training and a peer-coaching network linking trained BIM users with colleagues undergoing development.
- R2 — Embed Learning into Project Scheduling: Formally designate a minimum of two protected learning hours per fortnight per employee within project resource plans, treated as a non-negotiable overhead equivalent to mandatory safety inspection time.
- R3 — Reformat Training as Short, Site-Specific Interventions: Extend the toolbox talk model — brief, regular, contextually anchored — to BIM basics, PM tools, quality control, and green building content, using data from Vagmine's own active projects to maximise perceived relevance and engagement.
- R4 — Commission Bilingual Training Materials: Develop Hindi-medium versions of core safety, quality, and technical training content to address the 14.4% language barrier and ensure site supervisors — whose safety roles are disproportionately consequential — are not systematically excluded from effective development.
- R5 — Formalise the Site-Based Mentorship Programme: Rebuild the mentorship scheme with

structured matching processes, defined meeting cadences, milestone-based learning objectives, and formal recognition of mentors' time contribution within their own performance frameworks.

- R6 — Link Learning Completion to Appraisal and Advancement: Integrate defined learning milestones and certification achievements into annual appraisal criteria, creating explicit pathways from BIM certification or safety qualification to expanded role scope or improved project allocation.

VI. CONCLUSION

This study provides robust empirical evidence that structured learning participation generates meaningful and measurable capability outcomes among construction professionals (r = 0.581), that organisational learning culture is the strongest predictor of retention intent, and that safety training serves simultaneously as a skill-building mechanism and a trust-signalling instrument. The findings establish a clear and actionable hierarchy of learning modality effectiveness specific to the construction sector — one that prioritises site-based practical experience and mentorship over digital and classroom formats — and identify BIM proficiency as the most critical and unaddressed skills deficit facing mid-market construction firms.

The study's principal academic contribution is its empirical documentation of the upskilling challenge within a mid-market construction firm context — a population underrepresented in existing workforce development research. Its principal practical contribution is a set of six targeted, evidence-grounded recommendations implementable within existing operational and budgetary constraints.

Directions for future research include longitudinal tracking of learning participation and career or safety outcomes; comparative studies across multiple construction firms of varying sizes and specialisations; and specific examination of how emerging technologies — XR training simulations, AI-assisted adaptive learning — might overcome the site-access constraints that currently limit digital learning effectiveness in construction.

REFERENCES

1. Arashpour, M., Wakefield, R., Lee, E. W. M., & Abbasi, B. (2016). Analysis of skill imbalances in the construction industry: Case of trade occupations. Journal of Management in Engineering, 32(3), 1–9.
2. Becker, G. S. (1964). Human capital: A theoretical and empirical analysis, with special reference to education. University of Chicago Press.
3. Cedefop. (2022). Upskilling and reskilling pathways for low-qualified adults. Publications Office of the European Union.
4. Choudhry, R. M., Fang, D., & Mohamed, S. (2007). The nature of safety culture: A survey of the state-of-the-art. Safety Science, 45(10), 993–1012.
5. CIDC. (2022). National skill gap assessment for the construction sector. Construction Industry Development Council of India.
6. Dainty, A., & Loosemore, M. (Eds.). (2013). Human resource management in construction projects (2nd ed.). Routledge.
7. Deloitte. (2023). Global Millennial and Gen Z survey 2023. Deloitte Touche Tohmatsu Limited.
8. Eadie, R., Browne, M., Odeyinka, H., McKeown, C., & McNiff, S. (2013). BIM implementation throughout the UK construction project lifecycle. Automation in Construction, 36, 145–151.
9. Government of India. (2022). National Infrastructure Pipeline progress report. Department of Economic Affairs, Ministry of Finance.
10. Lave, J., & Wenger, E. (1991). Situated learning: Legitimate peripheral participation. Cambridge University Press.
11. LinkedIn. (2023). Workplace learning report 2023. LinkedIn Corporation.
12. Ministry of Labour and Employment. (2023). Annual report on occupational safety and health statistics. Government of India.
13. NICMAR. (2023). State of BIM adoption in India: Industry survey report. National Institute of Construction Management and Research.
14. Noe, R. A., Clarke, A. D. M., & Klein, H. J. (2014). Learning in the twenty-first-century workplace. Annual Review of Organizational Psychology and Organizational Behavior, 1(1), 245–275.
15. Salas, E., Tannenbaum, S. I., Kraiger, K., & Smith-Jentsch, K. A. (2012). The science of training and development in organizations. Psychological Science in the Public Interest, 13(2), 74–101.
16. Senge, P. M. (1990). The fifth discipline: The art and practice of the learning organisation. Currency Doubleday.
17. Sunindijo, R. Y., & Zou, P. X. W. (2012). The roles of emotional intelligence, interpersonal skill, and transformational leadership in improving construction safety. Australasian Journal of Construction Economics and Building, 12(3), 114.
18. World Economic Forum. (2023). The future of jobs report 2023. World Economic Forum.
19. Zohar, D. (2000). A group-level model of safety climate: Testing the effect of group climate on microaccidents in manufacturing jobs. Journal of Applied Psychology, 85(4), 587–596.