

Humanizing Businesses for a Better World of Work

This page intentionally left blank

Humanizing Businesses for a Better World of Work

EDITED BY

RADHIKA SHRIVASTAVA

Fortune Institute of International Business, India

AND

KOKIL JAIN

Fortune Institute of International Business, India



United Kingdom – North America – Japan – India – Malaysia – China

Emerald Publishing Limited
Emerald Publishing, Floor 5, Northspring, 21-23 Wellington Street, Leeds LS1 4DL.

First edition 2024

Editorial matter and selection © 2024 Radhika Shrivastava and Kokil Jain.
Individual chapters © 2024 The authors.
Published under exclusive licence by Emerald Publishing Limited.

Reprints and permissions service

Contact: www.copyright.com

No part of this book may be reproduced, stored in a retrieval system, transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without either the prior written permission of the publisher or a licence permitting restricted copying issued in the UK by The Copyright Licensing Agency and in the USA by The Copyright Clearance Center. Any opinions expressed in the chapters are those of the authors. Whilst Emerald makes every effort to ensure the quality and accuracy of its content, Emerald makes no representation implied or otherwise, as to the chapters' suitability and application and disclaims any warranties, express or implied, to their use.

British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

ISBN: 978-1-83797-333-0 (Print)

ISBN: 978-1-83797-332-3 (Online)

ISBN: 978-1-83797-334-7 (Epub)



INVESTOR IN PEOPLE

Contents

List of Figures and Tables	vii
About the Editors	ix
About the Contributors	xi
Foreword	xv
Chapter 1 Outlook on Upskilling and Reskilling Capacities for Industry 5.0 <i>Rishabh Sachan, Kshamta Chauhan and Vernika Agarwal</i>	1
Chapter 2 Target 2047 and New-Age Management Challenges: An Indian Perspective <i>Kanupriya</i>	17
Chapter 3 Relation Between Working Over Office Hours and Lengthy Commutes on the Work–Family Balance: The Moderating Role of Perceived Organizational Support <i>Jayendra P. Sankar</i>	29
Chapter 4 The Pink Billion Dollar Club: Women Entrepreneurs, Public Policy and the Rise of Unicorns in India <i>Ajeeta Srivastava and Akanksha Jain</i>	49
Chapter 5 Participation Practices and Engagement: Inducing Results in Service Sector of India <i>Riya Gupta and Rachna Agrawal</i>	61
Chapter 6 Employee Voice Behaviour: Envisaging the Role of Ambidextrous Leadership and Employee Thriving <i>Shikha Choudhary, Mohammad Faraz Naim and Meera Peethambaran</i>	73

Chapter 7 Beyond Dollars and Cents: Unveiling the Positive Influence of Employee-Centred CSR for a Better Workplace	
<i>Mei Peng Low and Yin Xia Loh</i>	87
Chapter 8 Explorative Study on Understanding the Human-Centred Design to Nurture the Employee Experience	
<i>Shilpa Wadhwa, Parul Wadhwa and Fehmina Khalique</i>	109
Chapter 9 Conceptualizing Employee Voice Within Organizations: A Systematic Literature Review Based on Five Decades' Studies	
<i>Elahe Hosseini, Mehdi Sabokro and Aidin Salamzadeh</i>	127

List of Figures and Tables

Figures

Fig. 1.1.	Fuzzy Results of the Survey.	12
Fig. 3.1.	Hypothesized Research Model.	34
Fig. 3.2.	Moderating Effect of POS Between LC and WFB.	40
Fig. 3.3.	Moderating Effect of POS Between WOOH and WFB.	41
Fig. 4.1.	Initial Financial Assets.	55
Fig. 4.2.	Initial Knowledge Assets.	56
Fig. 4.3.	Individual's Present Net Worth.	57
Fig. 6.1.	Conceptual Framework.	80
Fig. 7.1.	Proposed Framework.	95
Fig. 8.1.	Human-Centred Design.	114
Fig. 9.1.	The Algorithm.	131
Fig. 9.2.	Axial Coding Mode for Conceptualizing EV from 1970 to 2022.	136
Fig. 9.3.	Analysis of Definitions by 1970–2022.	140

Tables

Table 1.1.	Transformation Rules of Linguistic Variables of Decision-Makers.	7
Table 1.2.	Consistency Index Table for FBWM.	9
Table 1.3.	Training Techniques in Firms.	10
Table 1.4.	Crisp Value for Optimal.	11
Table 2.1.	Road to 2047: A SWOT Matrix Analysis.	24
Table 3.1.	Descriptive Statistics ($N = 437$).	37
Table 3.2.	Data Normality.	38
Table 3.3.	Cronbach Alpha, Construct Reliability, Validity, and Fornell–Larcker Test of Discriminant Validity.	38
Table 3.4.	Goodness of Model Fit.	38
Table 3.5.	HTMT Results.	39
Table 3.6.	Path Coefficient.	39
Table 5.1.	KMO and Bartlett's Test.	66
Table 5.2.	Matrix Demonstrating Variables with Factors Along with Associated Values.	66

viii List of Figures and Tables

Table 5.3.	Correlation Matrix Demonstrating an Association Between the Types of Participative Practices.	67
Table 7.1.	Respondents' Profile.	97
Table 7.2.	Results of Composite Reliability and Convergent Validity.	98
Table 7.3.	Discriminant Validity Through HTMT.	99
Table 7.4.	Hypotheses Testing.	100
Table 7.5.	Coefficient of Determinant and Effect Size.	100
Table 7.6.	PLSpredict Analysis.	101
Table 8.1.	Variables Used in the Study.	116
Table 8.2.	Demographic Profiling.	117
Table 8.3.	Factor Analysis Details.	121
Table 8.4.	Multiple Regression Details – Model Summary.	121
Table 8.5.	Multiple Regression Details – ANOVA.	121
Table 8.6.	Multiple regression Details – Coefficients.	122
Table 9.1.	Summary Concepts and Definitions Related to EV.	130
Table 9.2.	Selective Codes Extracted.	133

About the Editors

Radhika Shrivastava, Faculty of OB/HR, Fortune Institute of International Business (FIIB), New Delhi. Ms Radhika Shrivastava is a Faculty of Practice with unique past experiences and achievements. Over the course of her professional career spanning two decades, she has emerged as an inspiring trainer, advisor, coach, and higher-ed leader in enabling organizations to build enduring success through her work in varied settings across industries, organizations, cultures, decision contexts, and countries. Her recent work with companies has been with business leaders in the area of change management during times of rapid growth, and especially around rallying teams around a shared purpose, creating a strong sense of collaboration, as well as encouraging stretch thinking with a deep focus on action. A graduate from Tufts University, MA with Bachelors in Mechanical Engineering, and MBA from Indian Institute of Management, Bangalore, she started her career with the global consulting firm Deloitte Consulting in Philadelphia, USA. She later worked with the International Finance Corporation in Washington DC for over 9 years as an Investment Professional. She is currently a Doctoral Candidate at the Henley Business School, UK, as well as at the helm of a Delhi based B-School FIIB, New Delhi, a top 40 B-School in India.

Kokil Jain, Faculty of Marketing, Fortune Institute of International Business (FIIB), New Delhi. Dr Jain is a Dean of Research & Professor of Marketing at FIIB, New Delhi. With over 20 years of experience in teaching and research, she has worked with some of the top academic brands and has been instrumental in enhancing the educational outcomes of Post Graduate Management Programs she has led. Her current role involves strengthening the research ecosystem at FIIB and promoting a positive climate of knowledge creation and dissemination. She is a passionate researcher, and her areas of research include Consumer Psychology, Consumer Brand Relationships, Service Transgressions & Inclusion in Marketing. Her work has been published in top-ranked international journals, including *Product and Brand Management*, *Journal of Consumer Marketing*, *Journal of Business Research*, *Internet Research*, to name a few. Additionally, she has 'guest-edited special issues for the *Journal of Business Research (ABDC-A Ranked)*, *International Journal of Information Management (A*)*, *Journal of Promotion Management (ABDC-B)*, *Journal of Global Marketing (ABDC-B)* & *Technology Forecasting & Social Change (ABDC-A)*. She and her team also received the AIM-Sheth Foundation Research Grant 2020 in Marketing Strategy.

This page intentionally left blank

About the Contributors

Vernika Agarwal is Associate Professor at Apeejay School of Management, New Delhi. She has a PhD in Operational Research from Department of Operational Research, University of Delhi, Delhi. Her research interests include sustainable supply chain management, multi-criteria decision-making, third-party logistic provider, sustainable lean manufacturing, operations management, optimization, and reverse logistics.

Rachna Agrawal is Associate Professor of Finance at J.C. Bose University of Science and Technology, YMCA, Faridabad, India. Her research interests include finance, accounts, and HR.

Kshamta Chauhan is Professor of International Business and Economics, and Dean-Academics at Fortune Institute of International Business (FIIB), New Delhi. She has a PhD in Economics from CCU, Meerut. Her research interests include non-performing assets, banking sector dynamics, sustainable development, skill development, employability, and the burgeoning green economy.

Shikha Choudhary is a PhD Scholar at the Department of Management, Birla Institute of Technology and Science, Pilani (BITS Pilani). Her areas of interest include organizational psychology, leadership, performance management, and employee emotions.

Riya Gupta is a PhD Scholar at J.C. Bose University of Science and Technology, YMCA, Faridabad, India.

Elahe Hosseini is presently in the Faculty of Economics, Management & Accounting, Yazd University, Iran. She has PhD in Organizational Behavior and Human Resource Management, Yazd University, Yazd, Iran. Her research interests are employee voice, organization behaviour, human resource management, and social and entrepreneurship activities to develop entrepreneurship in developing countries.

Akanksha Jain is presently working at Leadership Boulevard Pvt. Ltd, a unicorn corporate startup in the field of education. She is Co-Founder and Director of 'Bidoshala', a startup based on experiential learning pedagogy.

Kanupriya is Assistant Professor of Economics and Trade Policy Indian Institute of Foreign Trade, New Delhi. She has a PhD from IIFT, New Delhi. Her interest lies in the areas of gender, trade, employment, and marketing.

Fehmina Khaliq, Professor, Llyod Business School, Greater Noida. She has a PhD in Human Resource Management. Her research interests are human resource management, business communication, and cross-cultural management.

Yin Xia Loh is Lecturer at Department of Accountancy, Faculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia. Her research interests include consumer behaviour, mobile payment, and online shopping.

Mei Peng Low is currently an Associate Professor of Faculty of Accountancy and Administration, Universiti Tunku Abdul Rahman. Her research interests focus on organizational behaviour, micro-level CSR, ethics and social responsibility, and human resource management.

Mohammad Faraz Naim is presently an Assistant Professor, at Department of Management, BITS Pilani, Pilani, India. He has a PhD in Human Resource Management from the Indian Institute of Technology, Roorkee, India. His research interests include Gen Y / Millennials, talent management, knowledge management, high-performance work systems, social media in HR, and employer branding.

Meera Peethambaran is a PhD Scholar at the Department of Management, Birla Institute of Technology and Science, Pilani (BITS Pilani). She holds M.Phil in General Management from the Institute of Management in Kerala (IMK), University of Kerala. Her areas of interest include positive psychology, organizational psychology, leadership, and employee emotions.

Mehdi Sabokro is presently in the Faculty of Economics, Management & Accounting, Yazd University, Iran. His research areas are organization behaviour and human resource management.

Rishabh Sachan is currently working as an Associate (T&E) at The Boston Consulting Group. He have a bachelor's degree in management from Amity International Business School, Amity University, Noida. His expertise lies at the crossroads of business management and societal impact. His ongoing research showcases a deep dedication to green finance, technology-driven workforce dynamics, innovation, change management, and economic sustainability.

Aidin Salamzadeh is Assistant Professor at the Faculty of Management, University of Tehran, Iran. His interests are startups, new venture creation, and entrepreneurship. Aidin serves as an Associate Editor for the *Humanities and Social*

Sciences Communications (Nature.com); *Journal of Enterprising Communities*; *Revista de Gestão*; *Innovation Management Review* (Emerald), *Entrepreneurial Business and Economics Review*, *Journal of Women's Entrepreneurship and Education*, and *The Bottom Line* (Emerald). He is a Member of the European SPES Forum (Belgium), the Asian Academy of Management (Malaysia), Ondokuz Mayıs University (Turkey), and the Institute of Economic Sciences (Serbia). He co-founded the Innovation and Entrepreneurship Research Lab (London).

Jayendra P. Sankar is at present Programme Head – International Business, College of Administrative and Financial Sciences, University of Technology Bahrain. He has a PhD from the University of Madras, India. His research interests include development economics, human resource management, and marketing. <https://orcid.org/0000-0001-8435-2123>.

Ajeeta Srivastava is currently Associate Professor at Llyod Group of Institutions. She has PhD in Development Studies from Jamia Millia Islamia, New Delhi. She is closely associated with organizations like Steel Authority of India, Nuclear Power Corporation of India Ltd., Consortium of Women Entrepreneurs in India, etc.

Parul Wadhwa is Senior Manager Cognizant Consulting – Global Growth Market and has worked with the CXO level for multiple Fortune 500 companies spanning across geographies.

Shilpa Wadhwa is Associate Professor at I Business Institute-Greater Noida. She has a PhD from Sharda University and a Masters from the Delhi School of Economics. She is a Certified Trainer from The Indian Society of Training Development and Behavior Assessment certification from Indraprastha University. Her research interests include HR analytics and research.

This page intentionally left blank

Foreword

Radhika Shrivastava and Kokil Jain

Acknowledging the dynamics of technological business transformation, which now include a diverse set of intelligent social actors who are beyond biological human beings (Gladden, 2018), the ambition of the book is to bring forth and drive academic and practitioner discussions and debates around the importance of humanizing business within the context of this evolved landscape. By putting forward a human-centric approach to reimagine and reinvent future organizational structures, workplaces, and the workforce, the book provides distinctive perspectives on the main theme, *Humanizing Businesses for a Better World of Work*.

Academic debates on the topic have recognized the inadvertent need for businesses to respond and adapt to the evolving world of work by adjusting to more humanized thinking (Bowie, 2022; Guest et al., 2022; Lazarova et al., 2023; Mhatre & Mehta, 2023; Rotatori et al., 2021). The businesses need to be redefined by human norms, taking care of and allowing employees to be human (Dion et al., 2022). There is a well-grounded argument that businesses are integral parts of society and thus have a moral responsibility to build workplaces that promote employee dignity, work-life balance, and personal growth. Humanistic values can serve as a valuable resource in solving complex business challenges.

One of the key innovations necessary is the shift towards more flat, decentralized, and networked organizations (Mourtzis et al., 2022). These structures allow for greater autonomy and empowerment of employees, leading to increased engagement, motivation, and creativity. Furthermore, businesses need to recognize the value of diversity and inclusivity in the workplace and create structures that promote these values. This can include implementing flexible working arrangements, creating employee resource groups, and developing mentorship programs.

Organizations must redesign work models and environments to create meaningful experiences for employees, including gig workers and freelancers, by offering flexible working arrangements, remote options, and collaborative workspaces (Babapour Chafi et al., 2022).

Finally, organizations should cultivate their brand's personality and values by engaging with customers through co-creation and feedback and involving them in their mission and values to build stronger customer relationships and drive growth.

The scholarly debate on humanizing businesses implicates multidimensional perspectives involving ethical, strategic, and pragmatic deliberations. As we

progress, this discourse will become stronger, asserting the role of businesses in redefining a more humane, inclusive, and sustainable world.

This book reflects the ongoing trajectory on the topic and features nine new studies on new-age management challenges, work–family balance, gender-based skewness in entrepreneurship, participative practices for engaging employees, ambidextrous leadership, upskilling & reskilling, the conceptualization of employee voice, human-centred organizational design and employee-centred CSR. The studies make meaningful contributions to the progression of scholarly and practice thinking in the area.

The selected chapters provide an important strategic perspective on how organizations can transform their structures and practices to accommodate a more humanized, people-first workplace in the face of the fundamental transitions happening in the post-pandemic world.

The book will be of great value to management scholars working on the ‘human’ aspect of business across different disciplines. The book can also be a teaching resource across graduate, post-graduate, and doctoral programs. It can bring interesting perspectives in courses on ethics, human resource, organizational culture & behaviour, and others.

For practitioners, the book will provide pertinent insights and perspectives into topics important for business decisions.

A global call for chapters invited scholars researching at the forefront of the theme to submit their work on the following broad sub-themes – Remote work and virtual teams, Employee engagement and well-being, Sustainable practices, Diversity, equity, and inclusion, Human-centred design, Employee autonomy, and empowerment & Human-heartedness. After multiple rounds of rigorous review, nine articles were accepted to feature in the book. The following section briefly outlines a summary of the research articles curated in this book and how they contribute to advancing the chosen theme are included below.

In their paper titled, *Outlook on Upskilling and Reskilling Capacities for Industry 5.0*, authors Sachan, Chauhan, and Agarwal (2023) are motivated to explore the dynamics that accelerate the gap between corporate skill demand and academic education in the face of the dynamic human–machine interaction-focused production model termed industry 5.0. By analyzing training and development approaches through the survey of HR Directors and T&D specialists in 14 sectors, and employing the non-linear best-worst method technique for analysis, the research provides valuable insights to address employability challenges in Industry 5.0. The authors contribute by advocating for a more human-centred, dynamic, and adaptive education and training system that underlines the necessity of early career clarity, literacy, and a focus on domain-specific skills.

The next chapter in the book is an opinion article by Kanupriya (2023) which is an attempt at bridging the divide between contemporary literature on the new age management challenges and India’s journey to Target 2047 that marks the 100th year of the country’s independence. Titled, *Target 2047 and New-Age Management Challenges: An Indian Perspective*, the article employs a simplistic review of literature-cum-personal analysis-based approach, to critically comment on the interaction between the challenges of a rapidly evolving workplace and

the pre-existing socio-economic roadblocks in the country, to tell India's development story. It contributes by advocating for concerted action for employee welfare, adoption of the latest digital technologies, improving inter-and intra-team communication, upgrading the skills of employees, promoting innovation, and employment of women in decent jobs with robust wage and social security structures.

The third chapter in the book, *Relation Between Working Over Office Hours and Lengthy Commutes on the Work–Family Balance: The Moderating Role of Perceived Organizational Support*, is unique in its adoption of extrinsic variables in work–family border theory to measure the work–family balance of IT-BPM employees. In exploring work–family balance, which is aligned with employee engagement, well-being, and human heartedness, the study authored by Sankar (2023), is an inferential statistics cross-sectional study utilizing data from 437 full-time employees of IT-BPM companies in five metropolitan cities in India. The implications from the study enhance the work–family balance's theoretical and practical effects, by filling knowledge gaps and adding to the literature on the importance of work–family border theory, and providing a competitive benchmark for IT-BPM managers, administrators, and governing bodies of employee well-being.

The Pink Billion Dollar Club: Women Entrepreneurs, Public Policy and the Rise of Unicorns in India, authored by Srivastava and Jain (2023), examines the gender-based skew of women-led unicorns in India, and especially the impact of public policy on start-ups and women entrepreneurship in India. The study is of interest to policy-makers, researchers, and academicians who wish to study the gender patterns of the best-performing companies in the country. Using secondary data, the authors have hypothesized and tested the challenges associated with the success of women-led entrepreneurial ventures and conclude with suggestions for improving the policy framework in India.

Participation Practices and Engagement: Inducing Results in Service Sector of India, by Gupta and Agrawal (2023), connects two themes in the extant literature – 'Employee engagement and well-being' and 'Employee autonomy and empowerment' to explore the types of participative practices for engaging employees in service sector organizations in India. Using exploratory factor analysis on primary and secondary data, the authors have analyzed practices related to employee participation which includes delegation, empowerment, and autonomy as a tool that leads to mental peace, satisfaction and ultimately retention of the workforce in the organization. Their findings contribute to service sector employers devising effective employee engagement strategies.

Employee Voice Behaviour: Envisaging the Role of Ambidextrous Leadership and Employee Thriving, by Choudhary, Naim, and Peethambaran (2023), is a conceptual study that examines the relationship of ambidextrous leadership with employee voice behaviour, considering the intervening role of employee thriving. It contributes to theory by expanding the literature on leadership style, particularly ambidextrous leadership, employee thriving and employee voice behaviour. The proposed model in the study, that delves into unexplored territory of ambidextrous leadership acting as a catalyst for enhancing employee voice via the lens of employee thriving, is ripe for a future empirical study.

Beyond Dollars and Cents: Unveiling the Positive Influence of Employee-Centred CSR for a Better Workplace, authored by Low and Loh (2023), focuses on employee-centred CSR (ECCSR) which concerns the psychological and physiological well-being of the employees. The empirical evidence that generated through the study holds promise for theory, practice, and policy setting. Future researchers can extend the framework proposed to explore additional determinants that mediate or moderate the relationship between ECCSR and employees' well-being. For organizations, the study contributes strategies to implement ECCSR and reap its multifold benefits. For policy-makers, the study proposes good practices of ECCSR for both the organization and national well-being.

Explorative Study on Understanding the Human-Centred Design to Nurture the Employee Experience, by Wadhwa, Wadhwa, and Khaliq (2023), aims to develop a nuanced understanding of the outlook of corporate professionals towards the scope of AI with humans to create human-centred design (HCD) in order to nurture the employee experience (EX). By spotlighting HCD as a problem-solving methodology, the mixed methods study finds that companies can attract and retain top talent, increase employee engagement and productivity, and gain a competitive advantage by integrating robotics and EX design into their HCD efforts. The study thus advocates for striking a balance between automation and human interaction to positively impact employee experience.

The last paper in this collection by Hosseini, Sabokro, and Salamzadeh (2023) titled *Conceptualizing Employee Voice Within Organizations: A Systematic Literature Review Based on Five Decades' Studies*, is a maiden attempt to conduct an employee voice systematic literature review based on the definition of key factors and the complex relations in an employee voice process. A unique contribution of the study is to present a coherent conceptualization of employees' voices, which was previously a multi-dimensional, emerging field that has been the subject of definitional debates in the literature. Through the study the authors have progressed the discourse on employee voice from conceptualization to its implementation, thus making a sound contribution.

Acknowledgements

The co-editors would like to thank the Emerald Publishing team for allowing us to contribute to a very relevant and timely research topic. We would also like to thank all the contributing authors for their valuable and pertinent contributions. A sincere thanks to all the reviewers who contributed greatly through their helpful and invaluable suggestions and recommendations for the authors, greatly improving the quality of the selected manuscripts.

References

- Babapour Chafi, M., Hultberg, A., Bozic Yams, N., Molina-Sánchez, H., Giorgi, G., Guajardo, D. C., ... Yams, N. B. (2022). Post-pandemic office work: Perceived challenges and opportunities for a sustainable work environment. *Sustainability*, *14*(1), 294.
- Bowie, N. E. (2022). A Kantian perspective on humanizing business. In *Humanizing business: What humanities can say to business* (pp. 3–15). Springer International Publishing.
- Dion, M., Freeman, R. E., & Dmytryiev, S. D. (Eds.). (2022). *Humanizing business: What humanities can say to business* (Vol. 53). Springer Nature.
- Gladden, M. E. (2018). A phenomenological analysis of the post-humanized future workplace. *Kwartalnik Nauk o Przedsiębiorstwie*, *48*(3), 31–39.
- Guest, D., Knox, A., & Warhurst, C. (2022). Humanizing work in the digital age: Lessons from socio-technical systems and quality of working life initiatives. *Human Relations*, *75*(8), 1461–1482.
- Lazarova, M., Caligiuri, P., Collings, D. G., & De Cieri, H. (2023). Global work in a rapidly changing world: Implications for MNEs and individuals. *Journal of World Business*, *58*(1), 101365.
- Mhatre, S. G., & Mehta, N. K. (2023). A review of workplace spirituality: Identifying present development and future research agenda. *Management Research Review* [Ahead-of-print].
- Mourtzis, D., Angelopoulos, J., & Panopoulos, N. (2022). A Literature Review of the Challenges and Opportunities of the Transition from Industry 4.0 to Society 5.0. *Energies*, *15*(17), 6276.
- Rotatori, D., Lee, E. J., & Sleeva, S. (2021). The evolution of the workforce during the fourth Industrial Revolution. *Human Resource Development International*, *24*(1), 92–103.

This page intentionally left blank

Chapter 1

Outlook on Upskilling and Reskilling Capacities for Industry 5.0

Rishabh Sachan^a, Kshamta Chauhan^b and Vernika Agarwal^c

^a*The Boston Consulting Group, Mumbai, India*

^b*Fortune Institute of International Business, New Delhi, India*

^c*Apeejay School of Management, Dwarka, New Delhi, India*

Abstract

Purpose of This Chapter: This research aims to study the need for more age of qualified talent. The evolving corporate needs, education, and curriculum require urgent reform. Current university methods do not align with corporate demands due to outdated content and ineffective pedagogy.

Design / Methodology / Approach: Drawing on established research, this study delves into 7 prominent training strategies across 14 sectors. A survey of 53 HR professionals and managers forms the basis for employing the non-linear best–worst method (BWM) and the Fuzzy BWM to discern the most effective training and development (T&D) modules. This comprehensive methodology ensures a nuanced analysis of T&D practices and insights for businesses seeking to align with Industry 5.0 demands.

Findings: On-the-job training emerges as the most impactful method, followed by case studies, interactive group learning, and more. These methods enhance employee skills in Industry 5.0.

Research Limitations: Limited by a small sample, future research should expand participant diversity for robustness.

Practical Implications: The study holds significance for bridging the skill gap between academic institutions and Industry 5.0. Aligning strategies with industry needs reduces skill disparities, fuels growth, and addresses

employability. The study's impact extends to society, lowering unemployment and shaping a resilient, adaptable workforce for Industry 5.0.

Originality: This innovative research examines decision-making for implementing T&D strategies in the emergence of Industry 5.0, aligning with a human-centric approach to business transformation.

Keywords: Employment; skills; training and development; academic education; Industry 5.0; best–worst method; human-centric approach

1. Introduction

Education is viewed as one that helps a country's social, political, cultural, and economic evolution. The social sector of a country, specifically health, rural development, education, and job creation, has grown in importance under the current economic system (Márquez-Ramos, 2021). Over the last few decades, the country's technical and managerial education system has grown substantially. Firms have developed significant capabilities in traditional discs and many emergent domains (De Toni & Pessot, 2021). Modern technologies and disciplines necessitate flexible and nimble human capital to remain competitive in today's business environment. To satisfy the current needs, many organizations in specialized areas demand superior human resources. A well-planned and well-organized education system is essential for building such human capital (Sony & Aithal, 2020). Thus, higher education institutions play an especially crucial role, and the teaching and learning processes at higher education institutions should teach knowledge and skills to future graduates (Kh & Kh, 2021). However, employment status is not as envisaged by businesses. According to the survey by ISR Report (2022), less than half of Indian graduates are employed. In 2021, as many as 45.9% of graduates were employed, a decrease from 46.21% in 2020 to 47.38% in 2019. MCA [master's in computer application] graduates had the lowest employment rate at 22.42%, followed by polytechnic graduates at 25.02% (ISR Report, 2022). In such cases, it is critical to improve employability skills to keep or obtain a job and improve the employment rate. Previously, employability skills were assumed to be purely occupational or job-specific; they were not thought to include the academic abilities most typically taught in schools (Holmegaard et al., 2014). However, current thinking has widened the concept of employability skills to encompass numerous core academic talents and a broad range of attitudes and behaviours (Balsmeier & Woerter, 2019). Interpersonal skills are crucial skill for contemporary corporate needs (Lerman & Schmidt, 1999); there are several critical transferable talents, including the capacity to address complex, interdisciplinary problems, work effectively in teams, demonstrate strong oral and written communication skills, and exercise solid interpersonal skills. Educational institutions play a crucial role in equipping students with the necessary corporate skill sets; however, other factors contribute significantly to the pervasive issue of unemployment. For instance, in 2021, the global employability rate was predicted to be 44.36%, with male employability at

45.97% and female employability at 51.44% in 2022. These rates are notably higher compared to India (Rathore, 2023).

The youth unemployment (YU) rate refers to people in the labour force aged 15 to 24 who are unemployed. The YU rate in India was 23.01% in 2019, having risen steadily since 2007, with the most significant increases in 2009–2010 and 2010–2011 (due to the recession). The sole downward trend shown in the data is in 2004–2005, 2005–2006, and 2006–2007 (OECD, 2022).

According to Banerji and Seth (2011), many firms struggle to find talented individuals, leading to numerous job openings due to a lack of required skills. Employers attribute the problem of unemployment to a shortage of talent, particularly in tier-3 and tier-4 colleges, where students face deficiencies in technical and soft skills. The McKinsey Global Survey on future workforce needs (Upwork, 2020) reveals that 9 out of 10 executives and managers foresee talent shortages within the next 5 years.

2. Purpose and Motivation

The study delves into Industry 5.0, a human–machine interaction-focussed production model aiming to bridge skill gaps through effective training and development (T&D) methods. By analyzing current practices, it seeks to propose strategies for corporations to thrive in Industry 5.0. Motivated by the challenging employment landscape for educated graduates in India, the research aims to identify barriers and offer solutions to enhance employability and reduce unemployment, contributing to a prosperous future for the skilled workforce.

3. Objective of the Study

- To analyze the gap in prevailing sectors due to the advent of the new-age business model in Industry 5.0.
- The research primarily investigates the T&D approaches that firms might employ for their employees to establish resilient and innovative workforce and skill-oriented organizations that empower them in Industry 5.0 to build a dynamic, resilient, and sustainable business.

4. Literature Review

India faces a major skill crunch in private corporations leading to only 45.9% of employable graduates crunching in the country (Jha et al., 2021). According to Bhatt and Smita (2021) analysis, adequate skills are not fulfilled; corporate recruiters are looking for employees with soft skills who can contribute value to the workplace and build a focus. Employees or businessmen must be able to communicate effectively, have a good relationship with their co-workers, accept cooperation, take initiative, have a decent work ethic, and present themselves professionally (Robles, 2012).

Padmini (2012) argued that education and training centres enhance manpower capacity. These institutions must guide individuals towards acquiring the skills required in the contemporary corporate world (Blau et al., 2021). The study identified five critical skills that an individual needs to develop to become

employable. These include technical, job-specific skills (Kenayathulla et al., 2019) and fundamental professional work ethics. These ethics encompass written communication, self-management, critical analysis, and process skills such as problem-solving and decision-making (Nair, 2020). Essential personal qualities include self-confidence, adaptability, communication, and soft skills (Succi & Canovi, 2020).

According to a published article by Ravi (2019) in Bloomberg, reported that 93% of students are only aware of 7 career streams that are Engineering 23.53%, Computer application & IT 9.56%, Medicine 8.08%, Management 6.71%, Designing 6.06%, Law 4.38%, and others 29.87%, that leaves students to select 3–4 career options only out of 12,000 careers available in the world. Kholmurzaev and Tokhirov (2021) state that parents highly influence a career decision, and lack of knowledge among parents leads to accumulating a high percentage of students enrolling for the same 5–6 careers only in that, around 81% of students choose their career without interest which later led to a mid-age career crisis. A recent report by the government that of 15 clerk-level positions in DM's office, around 50,000 candidates have registered, 5 servicemen in the municipality around 17,000 candidates have registered are some examples of competition in selected career options (Chakrabarty, 2019).

Tovar (2015) highlights the role of educational institutions, counsellors, and institutional agents (faculty and academic counsellors) in high school or college are highly effective factors for an individual's overall growth and development of an individual towards their career and generating employability skills. Students' achievement and willingness to continue and progress are influenced by participation in an academically difficult curriculum and a counselling-intensive support program (Noah & Aziz, 2020).

A study by Veld et al. (2015) found that educational institutions fall short of equipping students with every possible skill they require to advance in their careers and become employable. Consequently, firms propose training options and simulation training modules like on-the-job training (OJT) to meet the corporate need. When it comes to employing fresh graduates, one of the significant gaps that worries both corporations and engineering academics is the absence of sufficient Social Skills (IBM Skill Report Study, 2020). According to a National Statistical Survey, just 45.9% of graduates in 2021 will be employed. The main reason for their unemployment is a lack of soft skills (Ministry of Statistics & Programme Implementation et al., 2019).

Apte and Bhave-Gudipudi (2020) emphasized the importance of soft skills and learning techniques in a corporate environment, particularly through applying Cooperative Learning (CL) theory. CL includes various methods such as classroom instruction, peer tutoring, and group work. Several techniques, such as the Jigsaw Classroom, Dansereau Associates, Reciprocal Peer Tutoring (RPT), and strategies developed by Johnson, Johnson, Smith, and Frank Lyman, have been employed under this umbrella. These techniques, often misnamed in the context of CL, are cognitive learning tactics that equip employees with the necessary learning capabilities. T&D programs assist businesses in moulding necessary candidates and grooming them as highly employable individuals (Koraš et al., 2020). The study by Angole and Abal (2022) examines the relationship between training and organizational performance, identifying the positive impact of training initiatives on the organization's overall performance, contributing to the field of business and management.

The key indicators of career success and development include support from supervisors through mentoring and career counselling, and workplace learning opportunities. These opportunities often come in job enrichment, expansion, and rotation processes. According to [Clarke \(2017\)](#), companies may play a key role in boosting an individual's professional success and employability can be supported through a combination of on-the-job workplace development options. Human resource and work design practices may be more effective in sustaining individual employability than other educational institutions ([Dong et al., 2017](#); [Martini & Cavenago, 2017](#)).

Authenticity and integrity in academic assessments are imperative. The Indian educational curriculum, filled with examination and theoretical learning, can only be sustained if proper conduct and academic standards are met ([Blau et al., 2021](#)). However, several Tier 2, Tier 3, and Tier 4 colleges sometimes implement an assessment process that derails the growth and development of the student ([Lara & Nava, 2018](#); [Sotiriadou et al., 2020](#)). Employees may get career-related growth and skills that will help them advance in their careers, boost performance and productivity, and become industry professionals through training ([Rashaad Shabab & Reilly, 2022](#); [Subramanian & Kumar, 2017](#)).

[Sendawula et al. \(2018\)](#) explore the relationship between training, employee engagement, and employee performance in Uganda's health sector, offering evidence-based insights to enhance workforce productivity and service quality.

Human resource managers must incorporate an effective T&D module in their post-hiring procedures to make employees skill-ready and employable following the demands of the business ([Stovel & Bontis, 2002](#)). As per [Singh and Shukla \(2018\)](#), to stay well-bred in the face of dynamic changes in business structure and operations necessitates a learning mentality and a developing nature. Incorporating new technology and job shifts in several fields and industries necessitates multidisciplinary learning ([Healy et al., 2017](#); [Zubair & Khan, 2018](#)). Employees with strong leadership skills and an effective product and personal work ethic are in short supply ([Uraon, 2018](#)). A small percentage of the corporate population has such multidisciplinary talents. [Gajek \(2022\)](#) discusses organizational solutions for employee training to be included in the safety management system. According to a study by [Streeck \(2019\)](#), companies across various sectors and industries consistently seek workers with the necessary skill set and expertise. However, when considering domain categorization – that is, when companies operate in distinct sectors such as aviation or FMCG – career transitions often necessitate extensive employee training and learning ([Schuler et al., 2011](#)). Companies have T&D in place, but the efficiency and learning outcomes are insufficient. Corporations require effective T&D that trains employees, especially for job-related abilities ([Imran & Tanveer, 2015](#)). In the study of [Bozer and Jones \(2018\)](#), various T&D modules facilitate skill enhancement, but a proper selection of T&D techniques and trainers is required, leaving firms perplexed. Finally, previous research suggests the importance of T&D modules for advancing skill and growth ([Jehanzeb & Bashir, 2013](#)). However, the researchers fall short of establishing criteria to determine the specified training technique to enhance skills and make employees job-oriented. This results in non-skilled and ill-trained employees struggling to be retained by the company and, as a result, lowering the country's employability rate. Previous research has not explored the optimal training methods for

enterprises across different sectors. Therefore, the main objective of this study is to evaluate existing T&D programs used in businesses to enhance workforce skills and create a framework for sector-specific T&D implementation.

India currently faces a scarcity of skilled workers in various industries, posing challenges for employers in finding qualified personnel. Improving workforce skills and quality is crucial to address employability issues. Technical education institutions also encounter problems such as outdated curricula, inadequate teaching staff, and poor material quality. While previous studies have focused on the employment and skills gap, this research aims to examine training programs to identify best practices for skill development.

5. Research Methodology

The research utilized convenience sampling to select a sample size of 53 participants from the HR consulting firm's client base of 100+, ensuring a representative sample. The study analyzed training methodologies in the firm's T&D program, focusing on 7 significant strategies across 14 sectors. The 53 respondents, including HR directors and T&D specialists, provided valuable insights into the effectiveness of the training techniques. This diverse sample enhances the findings' applicability and allows for robust analysis across various sectors.

Rezaei (2015), in his paper, explained how the best–worst method (BWM) non-linear is used to solve multi-criteria decision-making (MCDM). The best (desirable, essential) and the worst (comparatively less critical and desirable) are determined.

The paper uses the Fuzzy BWM to identify the most to get more realistic results in decision-making problems and calculate the survey's credibility.

Step 1. Build the decision criteria system.

The decision criteria system consists of a set of decision criteria on which analysis is to be made. In the present scenario, the vulnerabilities constitute the decision space $\{W_1, W_2, \dots, W_7\}$.

Step 2. Determine the best (most used) T&D module and the worst (least used) T&D module applied in companies.

The best (most used) T&D technique and the worst (least used) T&D technique are identified based on the opinion of the decision-makers. The best criterion is represented as T_B , and the worst criterion is labelled as T_W .

Step 3. Execute the fuzzy reference comparisons for the best criterion.

By using the linguistic terms as given in Table 1.1, the fuzzy preferences of the most used T&D module over the remaining are determined.

Then, the obtained fuzzy preferences are transformed into triangular fuzzy numbers (TFNs) according to the transformation rules shown in Table 1.1. The obtained fuzzy Best-to-Others vector is:

$$A_b = (a_{b1}, a_{b2}, a_{bn})$$

where A_b represents the fuzzy Best-to-Others vector; A_{bj} represents the fuzzy preference of the best criterion T_B over criterion $T = 1, 2, \dots, n$. It can be known that $\tilde{a}_{BB} = (1, 1, 1)$.

Table 1.1. Transformation Rules of Linguistic Variables of Decision-Makers.

Linguistic Terms	Membership Function
Equally important (EI)	(1,1,1)
Weakly important (WI)	(2/3 ,1,3/2)
Fairly Important (FI)	(3/2 ,2,5/2)
Very important (VI)	(5/2 ,3,7/2)
Absolutely important (AI)	(7/2 ,4,9/2)

Source: Developed by authors.

Step 4. Execute the fuzzy reference comparisons for the worst criterion.

In this step, we compute the fuzzy preferences of all the criteria over the worst criterion. The fuzzy Others-to-Worst vector can be obtained as:

$$A_w = (a_{1w}, a_{2w}, \dots, a_{nw})$$

where A_w represents the fuzzy Others-to-Worst vector; \tilde{a}_{iw} represents the fuzzy preference of criterion I over the worst criterion a_w , $i = 1, 2, \dots, n$. It can be known that $\tilde{a}_{ww} = (1, 1, 1)$.

Step 5. Determine the optimal fuzzy weights (w_1, w_2, w_n) .

The optimal fuzzy weight for each criterion is the one where for each fuzzy pair $\tilde{W}_B / \tilde{W}_j$ and $\tilde{W}_j / \tilde{W}_w$, it should have $\frac{\tilde{W}_B}{\tilde{W}_j} = \tilde{a}_{Bj}$ and $\frac{\tilde{W}_j}{\tilde{W}_w} = \tilde{a}_{jw}$. To satisfy these conditions for all j , it should determine a solution where the maximum absolute gaps $|\frac{\tilde{W}_B}{\tilde{W}_j} - \tilde{a}_{Bj}|$ and $|\frac{\tilde{W}_j}{\tilde{W}_w} - \tilde{a}_{jw}|$ for all j are minimized. We use the following constrained optimization problem for determining the optimal fuzzy weights $(\tilde{w}^*_1, \tilde{w}^*_2, \dots, \tilde{w}^*_n)$ as follows.

$$\min \max_j \left\{ \left| \frac{\tilde{W}_B}{\tilde{W}_i} - \tilde{a}_{Bj} \right|, \left| \frac{\tilde{W}_j}{\tilde{W}_w} - \tilde{a}_{jw} \right| \right\}$$

$$\text{s.t.} \left\{ \begin{array}{l} \sum_{j=1}^n R(\tilde{W}_j) = 1 \\ l_j^w \leq m_j^w \leq u_j^w \\ l_j^w \geq 0 \\ j = 1, 2, \dots, n \end{array} \right.$$

where $\tilde{W}_B = (l_B^w, m_B^w, u_B^w)$, $\tilde{W}_j = (l_j^w, m_j^w, u_j^w)$, $\tilde{W}_w = (l_w^w, m_w^w, u_w^w)$, $\tilde{a}_{Bj} = (l_{Bj}, m_{Bj}, u_{Bj})$, $\tilde{a}_{jw} = (l_{jw}, m_{jw}, u_{jw})$. Eq. (6) can be transferred to the following nonlinearly constrained optimization problem.

$$\min \tilde{\xi}$$

$$\left. \begin{array}{l} \left| \frac{\widetilde{W}_B}{\widetilde{W}_j} - \tilde{a}_{Bj} \right| \leq \tilde{\xi} \\ \left| \frac{\widetilde{W}_j}{\widetilde{W}_w} - \tilde{a}_{jw} \right| \leq \tilde{\xi} \\ \text{s.t.} \left\{ \begin{array}{l} \sum_{j=1}^n R(\widetilde{w}_j) = 1 \\ l_j^w \leq m_j^w \leq u_j^w \\ l_j^w \geq 0 \\ j = 1, 2, \dots, n \end{array} \right. \end{array} \right\}$$

where $\tilde{\xi} = (l^\xi, m^\xi, u^\xi)$.

Considering $\min \tilde{\xi}^*$

we suppose

$$\left. \begin{array}{l} \left| \frac{(l_B^w, m_B^w, u_B^w)}{(l_j^w, m_j^w, u_j^w)} - (l_{Bj}, m_{Bj}, u_{Bj}) \right| \leq (k^*, k^*, k^*) \\ \left| \frac{(l_j^w, m_j^w, u_j^w)}{(l_{jw}^w, m_{jw}^w, u_{jw}^w)} - (l_{jw}, m_{jw}, u_{jw}) \right| \leq (k^*, k^*, k^*) \\ \text{s.t.} \left\{ \begin{array}{l} \sum_{j=1}^n R(\widetilde{W}_j) = 1 \\ l_j^w \leq m_j^w \leq u_j^w \\ l_j^w \geq 0 \\ j = 1, 2, \dots, n \end{array} \right. \end{array} \right\}$$

$\tilde{\xi}^* = (k^*, k^*, k^*), k^* \leq 1^\xi$, then Eq. (7) can be transferred as

$$\min \tilde{\xi}^*$$

$$\left. \begin{array}{l} \left| \frac{(l_B^w, m_B^w, u_B^w)}{(l_j^w, m_j^w, u_j^w)} - (l_{Bj}, m_{Bj}, u_{Bj}) \right| \leq (k^*, k^*, k^*) \\ \left| \frac{(l_j^w, m_j^w, u_j^w)}{(l_{jw}^w, m_{jw}^w, u_{jw}^w)} - (l_{jw}, m_{jw}, u_{jw}) \right| \leq (k^*, k^*, k^*) \\ \text{s.t.} \left\{ \begin{array}{l} \sum_{j=1}^n R(\widetilde{W}_j) = 1 \\ l_j^w \leq m_j^w \leq u_j^w \\ l_j^w \geq 0 \\ j = 1, 2, \dots, n \end{array} \right. \end{array} \right\}$$