

THE  
FUTURE OF  
**HRM**

IN A WORLD  
OF PERSISTENT  
VIRTUAL REALITY

EDITED BY

DINESH KUMAR

NIDHI SUTHAR

HAMED TAHERDOOST

MITRA MADANCHIAN

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EDITED BY

**DINESH KUMAR**

*Woxsen University, India; Lovely Professional University,  
India*

**NIDHI SUTHAR**

*Woxsen University, India*

**HAMED TAHERDOOST**

*University Canada West, Canada*

AND

**MITRA MADANCHIAN**

*University Canada West, Canada*



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INVESTOR IN PEOPLE

*This book is dedicated to pioneers and visionaries in the field of Human Resource Management who have showed great courage and innovation in embracing the challenges of the digital age.*

*To HR professionals who continue to reimagine a future of work through technology, and educators/scholars who advance knowledge towards excellence.*

*To the millions of workers worldwide whose resilience and adaptability inspire us to open new frontiers of how we work, learn and grow.*

*And to our families, friends and mentors – whose support and encouragement never wavered through it all.*

*This book is dedicated to you.*

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## ABOUT THE EDITORS

**Dr Dinesh Kumar** is a highly accomplished professional with extensive expertise in the military, academia, business and charity sectors. He holds a PhD from the prestigious Indian Institute of Technology (IIT) Roorkee and has received an admission offer for the Fellow Programme in Management from the Indian Institute of Management (IIM) Ranchi that made him the first soldier in Indian history to secure doctoral admission offers from both IIT and IIM. He is also the founder of Pomento and Mission Dost-E-Jahan. He has propounded the concept of 'Lifestyle Social Work.' He is a former management faculty member at Mittal School of Business, Lovely Professional University. Currently, he is working in the Department of Business Analytics at the School of Business, Woxsen University, India.

**Dr Nidhi Suthar** is an academician with more than a decade of experience in industry and academia. She is a faculty member in School of Business, Woxsen University.

**Dr Hamed Taherdoost** is a distinguished expert in research and development, with over 20 years of experience spanning both industry and academia. He is the founder of Hamta Business Corporation, an Associate Professor and Chair of the RSAC at University Canada West, and Director of R&D at Q Minded Technology Inc. His career includes significant contributions to international projects across various industries, including healthcare, transportation oil and gas, and IT, along with extensive experience as a technical consultant. In academia, Dr Taherdoost has been a prominent figure since 2009, teaching in Southeast Asia, the Middle East and North America. He has held key academic positions, including Adjunct Professor and Faculty Fellow roles at Westcliff University in the United States. His research has led to the publication of over 250 scientific articles in top-tier journals, along with 30 book chapters and 13 authored books. His work has garnered substantial recognition, with an h-index of 42, over 15,700 citations on Google Scholar and multiple best paper and presentation awards. Dr Taherdoost's leadership extends to organising and chairing numerous international workshops and conferences, where he is frequently invited as a keynote

speaker. He serves on the editorial, reviewer and advisory boards of several prestigious journals and has played a vital role in over 270 conferences worldwide. His contributions have been honoured with awards such as THE BIZZ Business Excellence Award and recognition in the Stanford-Elsevier list of the world's top 2% of scientists. Additionally, he holds certifications in cybersecurity and is involved in multidisciplinary research on innovation in IT, blockchain and cybersecurity.

**Dr Mitra Madanchian** is an Assistant Professor at University Canada West and an Adjunct Professor at Fairleigh Dickinson University. She is also the Director of Quark Minded Technology Inc. and Hamta Business Corporation. Holding a PhD in Business Management from Universiti Teknologi MARA (Malaysia), a Master of Administrative Science in Human Resources from Fairleigh Dickinson University, and both Master's and Bachelor's degrees in Applied Linguistics from University Putra Malaysia, she has a strong academic background. With over a decade of industry experience, including roles in both SMEs and a Big Four firm (KPMG), Mitra has established herself as an expert in Business Management and Research and Development. Her professional career spans various international companies, covering fields such as IT, International Trade, Finance, and Education. In addition to her industrial expertise, Mitra is an accomplished academic researcher, specialising in Business Management, Leadership, Human Resource Management, Marketing Management, FinTech and IT Management. Her work has been published by reputable publishers like Elsevier, IGI Global and MDPI, comprising over 50 scientific articles in peer-reviewed international journals, seven book chapters and a book on leadership. She is a member of CPHR and has served as a session chair and speaker at international conferences, presenting numerous papers. Currently, her research interests focus on the role of AI in HR and Marketing. Additionally, Mitra is authoring a book entitled *Ethics in Human Resource Management*, which is currently in press.

# LIST OF CONTRIBUTORS

<i>Drishiti Arora</i>	Independent Researcher, India
<i>Aaliya Ashraf</i>	Lovely Professional University, India
<i>Shabnam Bhagat</i>	Lovely Professional University, India
<i>Bhawna Bhawna</i>	Department of Commerce, PGDAV College, University of Delhi, New Delhi, India
<i>Sadhna Chauhan</i>	Maharishi Markandeshwar (Deemed to Be University), India
<i>Priyanka Chibber</i>	Lovely Professional University, India
<i>Shivani Dhand</i>	Lovely Professional University, India
<i>Evangeline E.T.</i>	Madras School of Social Work, India
<i>Rickard Enstroem</i>	MacEwan University, Canada
<i>Akashdeep Joshi</i>	Lovely Professional University, India
<i>P.B. Narendra Kiran</i>	Christ University, India
<i>Dinesh Kumar</i>	Woxsen University, India; Lovely Professional University, India
<i>Vinod Kumar</i>	Gurugram University, India
<i>Preeti Kumari</i>	Lovely Professional University, India
<i>Tuan-Vinh Le</i>	Fu Jen Catholic University, Taiwan
<i>Mitra Madanchian</i>	University Canada West, Canada
<i>Mehnaz Manzoor</i>	Lovely Professional University, India
<i>Ujjal Mukherjee</i>	Institute of Public Enterprise, India
<i>Aayushi Pandey</i>	Lovely Professional University, India
<i>Bhavana Raj</i>	Institute of Public Enterprise, India
<i>Saba N. Reshi</i>	National Institute of Technology Srinagar, India
<i>Nancy Sahnii</i>	Lovely Professional University, India
<i>Abhishek Sharma</i>	Lovely Professional University, India
<i>Avtar Singh</i>	Lovely Professional University, India
<i>Gagandeep Singh</i>	Lovely Professional University, India

<i>Hamed Taherdoost</i>	University Canada West, Canada; Global University Systems, UK; Hamta Business Corporation, Canada
<i>Mohd Rafiq Teli</i>	National Institute of Technology Srinagar, India
<i>Kiran Thakur</i>	University Canada West, Canada
<i>Rajesh Vemula</i>	Lovely Professional University, India
<i>Jasdeep Singh Walia</i>	Lovely Professional University, India
<i>Raghvi Wazir</i>	Lovely Professional University, India
<i>Ravishka Weerasinghe</i>	University of Kelaniya, Sri Lanka
<i>Pinnika Syam Yadav</i>	Lovely Professional University, India
<i>Nidhi Suthar</i>	Woxsen University, India

# FOREWORD

As the landscape of Human Resource Management (HRM) evolves at an unprecedented pace, *The Future of HRM in a World of Persistent Virtual Reality* stands as a groundbreaking exploration into one of the most transformative developments in our field. With over 20 years of experience in HR and consulting across diverse sectors such as hospitality, manufacturing, aviation, SAS and IT, I am delighted to present this insightful work.

In my international career, I have observed firsthand how technological advancements are not just augmenting but fundamentally reshaping HR practices. Virtual reality (VR) is one such advancement that holds exceptional promise for revolutionising how organisations approach HRM. This book addresses the profound implications of VR, a technology that I have seen fundamentally alter how companies manage talent, enhance training and drive performance. The integration of VR into HRM is not merely an innovation but a strategic evolution. From my work consulting with organisations, it is evident that VR's immersive capabilities can transform traditional HR functions. For instance, VR's ability to create highly realistic training environments offers employees unparalleled opportunities for experiential learning. This not only enhances skill acquisition but also improves retention and application of knowledge in real-world scenarios. Moreover, VR presents a compelling tool for advancing diversity and inclusion. By providing unbiased, consistent experiences, VR can mitigate unconscious biases in recruitment, training and evaluation processes. This aligns with the growing demand for more equitable HR practices, reflecting a critical shift towards inclusivity that I have championed in my consulting work.

Performance management, a cornerstone of effective HRM, is another area where VR's impact is profound. Traditional performance evaluation methods often struggle with objectivity and engagement. VR's ability to simulate various scenarios and provide real-time, interactive feedback can lead to more precise and actionable performance assessments. This dynamic approach supports a more responsive and effective performance management system, something that is increasingly essential in today's fast-paced work environment. The economic implications of VR for HRM are also noteworthy. While the initial investment

may be significant, the long-term benefits – ranging from improved employee engagement to enhanced organizational efficiency – offer substantial returns. My consulting experience has consistently shown that strategic investments in technology lead to significant benefits, making VR a sound investment for future-focused HR departments.

That being said, as the possibilities of VR are explored, it is crucial to recognise its limitations and approach its integration with a balanced perspective. While VR presents exciting opportunities, the challenges associated with its implementation cannot be overlooked. I acknowledge that one significant limitation is the substantial initial investment required for VR technology. The costs associated with acquiring VR equipment, developing content and maintaining the technology can be considerable. This financial commitment may present a barrier for many organisations, particularly those with constrained budgets. Despite the promising benefits, it is essential for organisations to carefully evaluate their readiness and capacity to invest in VR, ensuring that the technology aligns with their strategic goals and offers a sustainable return on investment.

Likewise, while VR provides immersive and interactive training experiences, it is important to acknowledge that these simulations may not fully replicate the complexities of real-world interactions. VR environments, despite their sophistication, can sometimes fall short in capturing the nuanced dynamics of human behaviour and workplace scenarios. This limitation underscores the necessity of integrating VR with traditional methods of training and performance management to ensure a comprehensive approach. Another aspect to consider is the adaptability of VR systems to diverse organizational contexts. The effectiveness of VR in enhancing performance management can vary depending on how well the technology is tailored to specific needs and goals. Organisations must be prepared to continuously assess and adjust their VR implementations to align with evolving requirements and to complement other performance management practices effectively.

As readers delve into the pages of this book, I encourage you to approach it with both curiosity and critical thinking. The *Future of HRM in a World of Persistent Virtual Reality* offers valuable insights into how VR can reshape HR practices, but it is equally important to explore the limitations and challenges discussed. Understanding the full spectrum of VR's impact will enable you to make informed decisions about how to leverage this technology effectively in your own organizational context.

In examining the transformative potential of VR, this book provides a balanced view that considers both the opportunities and the constraints of this technology. As you explore its chapters, you will gain a deeper understanding of

how VR can be harnessed to drive innovation in HRM while also recognising the need for careful implementation and integration. *The Future of HRM in a World of Persistent Virtual Reality* is an essential read for HR professionals, business leaders, and technology enthusiasts. It is a thought-provoking resource that will help you navigate the complexities of VR in HRM and inspire you to consider how this technology can be strategically applied to meet your organisational needs. I trust that this book will not only inform but also challenge you to think critically about the role of VR in shaping the future of HRM. Embrace the insights it offers, consider the limitations discussed and explore how VR can be strategically applied to drive innovation while being mindful of its constraints.

With best wishes

Gifty Parker

Faculty at University Canada West | Founder, CEO at  
PARKER HR Solutions

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# PREFACE

The digital age has heralded an epoch of disruptive change where the tangibility of the physical and intangibility of the virtual world are blurring further and further. Virtual reality (VR) stands right at the threshold of this change, where it has already started to redefine the topography of HRM. As organisations grapple with both the challenges and opportunities presented by VR, it becomes paramount to explore ways in which this technology can be harnessed in various HR functions ranging from recruitment and onboarding to training, development, and employee engagement.

These leading scholars and practitioners come together to examine the many dimensions of how VR impacts HRM. This edited volume provides comprehensive exploration in terms of how VR is going to transform HR practices, offering insights into theoretical and applied issues.

The book opens with a review of theoretical perspectives on VR in HRM, thus setting the ground for an in-depth understanding of the impact that immersion technologies may have on organisational practices. In this work, consecutive areas will be reviewed, among which is virtual academic entrepreneurship – where VR assumes a lead role in developing soft skills and fostering entrepreneurial mindsets. It also deeply explores the very critical process of virtual onboarding with a model that charts the phases necessary to create an immersive and effective onboarding experience.

The following chapters, therefore, deal with the strategic integration of VR in HRM, both opportunities and challenges. This book will show how VR can change the game with respect to recruitment, training and engagement but highlight also that managing the process of change well will be necessary if its full benefits are to be realised.

The contributors to this volume articulate quite clearly that the integration of VR into HRM is not without its challenges. These are from cultural alignment and development of digital organisational culture to complexities involved in implanting and implementing VR-based training and development programmes. These chapters provide very important insights for HR professionals, organisational leaders and scholars who would like to navigate the complexities of VR in the workplace.

The book not only mirrors current tendencies but looks into the future of HRM in a VR-enhanced, pervasive world. We truly believe that this volume may prove helpful for those intending to understand the potential of VR and help in facilitating its use within their human resources practice so that organisations will be better suited to thrive in the digital age.

-Dr Dinesh Kumar, Dr Nidhi Suthar, Dr Hamed Taherdoost  
& Dr Mitra Madanchian  
Editors

## ACKNOWLEDGEMENTS

Bringing this book to reality has been a collective journey, and we are deeply grateful to all those who have contributed to this project.

First and foremost, we would like to express our deepest gratitude to all the esteemed contributors of this volume. Your experience, commitment and ingenuity have made up the spine of this book. Your willingness to plunge into uncharted territories at the intersection of virtual reality and human resource management has produced a work that we believe will become a leading resource among scholars and practitioners alike.

We are deeply indebted to our colleagues and fellow members of the academic and professional communities who offered valuable comments, advice and encouragement during the preparation of this book. We are highly indebted to Dr Sanjeev Kumar, Department of Economics, Hansraj College, Delhi University; Dr Nitin Bisht, Department of Sociology & Social Work, Hemvati Nandan Bahuguna Garhwal University; and Dr Abhishek Singh, Department of Human Resource Management, Indian Institute of Management, Rohtak, for their very valuable inputs that most certainly furthered the depth and scope of this piece of work.

Special thanks go to Nick Wallwork of Emerald publishing who considered this book for publication and offered all the necessary support in bringing it out. Gratitude is also due to Aimee Wright for helping at various stages. We acknowledge also the help and dedicated efforts of Ms Sheena Reghunath of the Emerald publishing team during the post-editorial work. Only through their combined efforts could this book meet the highest standards of quality and relevance.

We also would like to extend our gratitude to the editorial and production team, whose tireless efforts behind the scenes saw this book to press. Your high level of professionalism and commitment has been the vital key to making our aspirations real.

We would like to thank our talented, dedicated and professional team Hamta Business Corporation, and Q Minded | Quark Minded Technology Inc for their support throughout this journey. We will also be most grateful to acknowledge support by our respective institutions, whose resources and

encouragement were invaluable in creating a conducive environment for our research and writing.

Lastly, to our families and loved ones – thank you for your patience, understanding and unwavering support. Your belief in how essential this work is having been our greatest motivation.

To everyone who played any role in the making of this book, whether through direct contribution or quiet support, we extend our deepest gratitude. This book would not have come into being without you.

-Dr Dinesh Kumar, Dr Nidhi Suthar, Dr Hamed Taherdoost  
& Dr Mitra Madanchian  
Editors

## Part 1

# FOUNDATIONS OF VR IN HRM

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# THEORETICAL PERSPECTIVES ON VIRTUAL REALITY IN HR

DINESH KUMAR

Woxsen University, India; Lovely Professional University, India

## ABSTRACT

*This chapter focuses on the integration of virtual reality (VR) into human resource management (HRM), with a special emphasis on theoretical underpinnings that support its adoption and utilisation. The speed at which technology is improving has placed VR as potentially game-changing for the field of HRM. This chapter reviews a number of theoretical models, including the Technology Acceptance Model, Unified Theory of Acceptance and Use of Technology, Diffusion of Innovations Theory and Social Cognitive Theory, in an attempt to make the framework as exhaustive as possible in the quest to unravel the ingredients that influence the acceptance of VR in HRM. This chapter discusses the practical implications of VR on the enhancement of organisational efficiency and employee well-being, based on a literature review of empirical studies that shed light on the challenges for VR applications due to technical limitations, ethical concerns and people's resistance to change. It concludes by indicating the literature gaps and proposing some future lines of research for the use of VR in HRM.*

**Keywords:** Virtual reality; human resource management; Technology Acceptance Model; employee training and development; organisational efficiency; ethical concerns in VR

## INTRODUCTION

The high speed of technology advancements has made substantial changes in various domains including human resource management (HRM) (Ayorinde et al., 2024; Best et al., 2010; Halili, 2019; Kumar et al., 2023; Kumar & Suthar, 2024; Madancian et al., 2023; McDonald et al., 2015; Ogbeibu et al., 2024; Sharma, 2022). These advancements quickly change the conventions in HRM (Abasaheb & Subashini, 2024; Dutta & Mishra, 2024; Mohammad Saif & Islam, 2024; Ogbeibu et al., 2024). Virtual reality (VR) is one such technology advancement. VR refers to a computer-generated, immersive, three-dimensional simulation experience where one can perform actions in an environment that seems either real or physical, through special electronic equipment, such as headsets with dual screens or gloves equipped with sensors (Gigante, 1993; Kardong-Edgren et al., 2019). This immersive technology can provide new, distinctive ways to better the experiences of employees, enhance training and development programmes and strengthen recruitment and selection processes.

Adoption of VR in HRM has been on the rise with the goal of fighting several challenges and improving organisational efficiency (Bharambe et al., 2021; Najam et al., 2022; Setianingrum et al., 2023). For example, VR-based training programmes provide a very safe and controlled environment to help employees learn and practice new skills (Akdere et al., 2022; Rey-Becerra et al., 2023). It reduces the risks and related costs associated with conventional methods of training. Similarly, it can aid in better recruitment, where the candidate can get a realistic job preview, assess person-job fit, etc. and go through experiences of interaction with would-be colleagues in a virtual environment (Durana et al., 2022). Furthermore, some VR applications to employee engagement and well-being programmes offer promising ways of creating real presence and community within remote or dispersed teams.

The main aim of this chapter is to investigate and define theoretical views upon which the use of VR in HRM depends. Through the literature review and theoretical constructs, this chapter seeks to develop a comprehensive view of how VR technology can be fruitfully applied in HR practices. This chapter will turn to the consideration of a variety of theoretical models, including Technology Acceptance Model (TAM) (Davis et al., 1989), the Unified Theory of Acceptance and Use of Technology (Venkatesh & Zhang, 2010), Diffusion of Innovation Theory (Dibra, 2015; García-Avilés, 2020; Miller, 2015), and Social Cognitive Theory (Bandura, 2001; Luszczynska & Schwarzer, 2015; Schunk & DiBenedetto, 2020). These models explain the factors that influence the adoption and utilisation within the HRM of VR.

This chapter will also examine conceptual models and frameworks developed for specific HR applications of VR such as training and development, recruitment and selection, employee engagement and well-being. Based on the empirical studies and findings, this chapter presents the practical implications and outcomes of the implementation in HRM. The challenges and critiques associated with the adoption will be based on technological limitations, ethical issues and resistance to change that VR might offer.

In this way, this chapter provides a wide perspective on theoretical and empirical insights that can support and enrich the understanding of VR in HRM on the side of HR practitioners, researchers and scholars. The presented work has the intention of providing additional value, in relation to a debate about how to integrate new technologies into HRM, and their possible contributions to work design, by pointing to the gaps in the literature and giving indications for further research.

## THEORETICAL FOUNDATIONS

This section touches on some of the theoretical bases that may be harnessed to understand the acceptance and implementation of VR in HRM. Some of these theories are the TAM, Unified Theory of Acceptance and Use of Technology, Diffusion of Innovations Theory, Social Cognitive Theory, all of which give insight into factors that influence acceptance and effective use of VR technology in human resource (HR) practices.

### Technology Acceptance Model

Perhaps one of the most used models to describe users' acceptance of technology is the TAM, proposed by Davis back in the year 1989. TAM posits two main factors: perceived usefulness and perceived ease of use as key elements which influence a person's intention to use any given technology. Perceived usefulness is the degree to which a person believes using a particular system will improve their job performance. Perceived ease of use refers to the degree by which a person believes that using a certain system will not require much effort. In the HRM context, it models how HR professionals and employees perceive benefits of VR in the improvement of HR functions. Knowledge of these perceptions may be used in the design and implementation of VR applications in order to gain maximum acceptance and effectiveness.

## Unified Theory of Acceptance and Use of Technology

Based on Venkatesh et al. (2003), the Unified Theory of Acceptance and Use of Technology is built on elements that have formed the base of some previous models of technology acceptance, such that it might explain comprehensively how technologies are adopted. It specifies four key constructs: performance expectancy, effort expectancy, social influence and facilitating conditions. Performance expectancy refers to the degree by which a person believes using the technology will help the user attain gains in job performance. The effort expectancy is defined as being the degree of ease associated with the use of the technology. Social influence denotes the degree to which an individual perceives that important others believe they should use the technology. Facilitating conditions refer to the degree to which an individual believes that an organisational and technical infrastructure exists to support the use of the technology. By applying theory in VR within HRM, it would be much easier for HR professionals to understand factors that influence the adoption and continued use of VR applications. For instance, when workers expect that VR is going to drastically improve their training outcomes – performance expectancy – and that it's easy to use – effort expectancy – then they will be more likely to adopt the technology. Next, positive social influences and strong facilitating conditions will further increase the willingness to accept VR in HR practices.

## Diffusion of Innovations Theory

The theory of the Diffusion of Innovations, proposed by Rogers in 1962, explains how, why and at what rate new ideas and technologies spread through cultures. In this theory, diffusion is determined by factors such as the innovation's relative advantage, compatibility, complexity, trialability and observability. Relative advantage refers to the degree by which an innovation is perceived as being better than the idea it replaces. In general, compatibility refers to the degree by which an innovation is perceived to be in line with the existing values, past experiences and needs of the potential adopters. On the other hand, complexity is an invention considered to be difficult to understand and apply. Trialability regards the degree to which an innovation may be experimented with on a limited basis, while observability refers to the degree to which the results of an innovation are visible to others.

Such knowledge in the domain of VR in HRM can, therefore, enable HR designers to take advantage of the factors that influence adoption and thus

design and implement VR initiatives that have a likelihood of being more easily adopted by employees. For instance, relative advantages, which entail the benefits of using VR training compared to other ways of training, are emphasised. Besides, the HR practice ensures that there is compatibility and trialling of VR applications by the employees, thus increasing its likelihood of adoption.

### Social Cognitive Theory

The Social Cognitive Theory places central emphasis on observational learning, imitation and modelling in changing behaviour (Bandura, 1986). This theory postulates that people learn through observing the behaviours of others and their consequences.

The Social Cognitive Theory in VR in HRM explains how, through VR simulation and training programmes, employees learn and adopt new behaviours. For example, in VR, it is possible to set environments to simulate scenarios in which employees observe and enact target behaviours in a completely risk-free environment. In case of success in enacting the target behaviour, one's sense of self-efficacy will be enhanced, promoting behaviour change. Informed by the understanding of how the Social Cognitive Theory works, HR professionals can build VR-based interventions that facilitate learning and behavioural change.

## HOW VR CAN HELP IN HRM?

This section will try to find out the answer of the research question, 'How VR can help in HRM?'

### Training and Development

VR seems set to redefine training and development programmes by engaging learners in immersive and interactive learning (Ahmed & Sutton, 2017; Checa & Bustillo, 2020; Mantovani, 2001). Not surprisingly, discussions of VR-based learning conceptual models typically begin with theories that claim explanations of experience in learning, and among these, the most common is often experiential learning theory (Kolb et al., 2014; Tembrevilla et al., 2024; Yardley et al., 2012). Via VR, employees are stimulated to engage in a lifelike

simulation, practice their skills and receive immediate feedback, which greatly enhances the outcomes of learning. This segment includes discussion of three primary components from virtual environments that enable learning: instructional design, user engagement and assessment methods.

### Recruitment and Selection

This application of VR in recruitment and selection processes exposes a host of opportunities for improving candidate appraisal and realistic job previews. Traditional methods normally fail to convey the nature of jobs and work environments that lead to mismatches between candidate expectations and job realities (Solihah et al., 2024). It helps bridge this gap by putting candidates inside the job through immersive, virtual work simulations so they will better understand the job tasks and company culture and increase the quality of the hires. This involves integration with virtual job interviews, job simulations and gamification of job analysis. VR job interviews allow candidates the platform to be exposed to digital avatars of interviewers within a stimulated office environment (Menon, 2021). This can reduce stress levels and builds real-time situational judgement tests in an effort to assess behaviour and decision-making. Job simulations let candidates go through tasks encountered on the job and allow hands-on skills and ability testing for a more precise evaluation than conventional ways (Cucina et al., 2015; Schmitt & Mills, 2001; Villani et al., 2017). Gamification is the process of creating engaging, activity-based simulation exercises which would replicate the real job-related responsibilities, and it is fun and, at the same time, very useful in effectively assessing competencies such as teamwork, leadership and adaptability (Kumar et al., 2021; Murawski, 2021; Vardarlier, 2021).

The benefits associated with VR-based recruitment are immense. Candidate experience improves, and the best talent gets attracted through engaging and interactive assessment. VR enhances the accuracy and objectivity of assessment by minimising bias, ensures standardised evaluation and thereby promotes fairness and equality. The challenges that the process presents are related to the very expensive technology of VR, technical expertise required and accessibility to all candidates. These will have to be addressed by organisations through detailed needs analyses, running pilot programmes first, investing in quality VR content, training HR staff and ensuring inclusivity and ethical design in VR practices. By using such best practices, enterprises can effectively incorporate VR into their recruitment strategy and be at the forefront of competition in selecting some of the finest talents.