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GEN Z WORKFORCE ENGAGEMENT: REDEFINING EMPLOYEE EXPERIENCE THROUGH THE METAVERSE

KETERLIBATAN TENAGA KERJA GEN Z: MENGUBAH PENGALAMAN KARYAWAN MELALUI METAVERSE

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ABSTRACT
The development of metaverse technology has changed the dynamics of the work experience, especially for Generation Z who are digital natives. This study aims to explore how the integration of metaverse technology can reshape employee experience and engagement in a virtual work environment.This study focuses on analyzing the impact of metaverse technology on Generation Z's engagement and work experience, taking into account psychosocial and behavioral aspects that are often overlooked in previous literature.This study used a Systematic Literature Review (SLR) approach to identify, evaluate, and synthesize findings from 68 relevant peer-reviewed articles. Data were collected through Scopus and Web of Science databases, and analyzed using thematic analysis techniques.Key findings suggest that elements such as virtual immersion, digital identity, and virtual collaboration significantly increase employees' emotional and cognitive engagement. Furthermore, the work flexibility offered by the metaverse has the potential to increase job satisfaction, although it also poses the risk of digital fatigue.This study makes an important contribution to employee engagement theory by highlighting the need to integrate digital wellbeing policies into human resource management practices. These findings are expected to serve as a guide for organizations in designing more inclusive and productive work environments.
Keywords:Metaverse, Generation Z, Employee Engagement, Work Experience, Digital Wellbeing

ABSTRAK
Perkembangan teknologi metaverse telah mengubah dinamika pengalaman kerja, terutama bagi Generasi Z yang merupakan digital natives. Penelitian ini bertujuan untuk mengeksplorasi bagaimana integrasi teknologi metaverse dapat membentuk ulang pengalaman dan keterlibatan karyawan di lingkungan kerja virtual. Studi ini berfokus pada analisis dampak teknologi metaverse terhadap keterlibatan dan pengalaman kerja Generasi Z, dengan mempertimbangkan aspek psikososial dan perilaku yang sering diabaikan dalam literatur sebelumnya. Penelitian ini menggunakan pendekatan Systematic Literature Review (SLR) untuk mengidentifikasi, mengevaluasi, dan mensintesis temuan dari 68 artikel peer-reviewed yang relevan. Data dikumpulkan melalui basis data Scopus dan Web of Science, dan dianalisis menggunakan teknik analisis tematik. Temuan utama menunjukkan bahwa elemen-elemen seperti imersi virtual, identitas digital, dan kolaborasi virtual secara signifikan meningkatkan keterlibatan emosional dan kognitif karyawan. Selain itu, fleksibilitas kerja yang ditawarkan oleh metaverse berpotensi meningkatkan kepuasan kerja, meskipun juga menimbulkan risiko kelelahan digital. Penelitian ini memberikan kontribusi penting terhadap teori keterlibatan karyawan dengan menyoroti perlunya integrasi kebijakan kesejahteraan digital dalam praktik manajemen sumber daya manusia. Temuan ini diharapkan dapat menjadi panduan bagi organisasi dalam merancang lingkungan kerja yang lebih inklusif dan produktif.
Kata Kunci: Metaverse, Generasi Z, Keterlibatan Karyawan, Pengalaman Kerja, Kesejahteraan Digital

1. INTRODUCTION

The emergence of the metaverse represents a significant shift in the digital landscape, characterized by immersive, interactive virtual environments where users engage through avatars. This transformation is heavily influenced by advancements in technologies such as virtual reality (VR), augmented reality (AR), artificial intelligence (AI), and blockchain, all of which converge to create experiences that mimic real-world interactions. In organizational contexts, the metaverse is increasingly adopted for employee training, remote collaboration, and job simulations, providing more engaging and interactive alternatives to traditional video conferencing methods (Símová et al., 2023; Mehta, 2023; (Onopriienko et al., 2023; .

The implications of these technologies are particularly profound for the workforce, especially concerning employee experience and engagement. Generation Z, defined as individuals born from the mid-1990s to the early 2010s, is often recognized as digital natives who expect high levels of technological integration in their work environments. Research indicates that this generation prioritizes flexibility, autonomy, and meaningful social connections—elements that the metaverse can effectively facilitate (Iqbal & Campbell, 2023; (Li, 2024; . With immersive environments, organizations can cater to these preferences, fostering enhanced collaboration and skill development among employees (Zhang et al., 2022; Wang et al., 2023).

Moreover, the implementation of immersive technologies like the metaverse is predicted to reshape not only employee training and engagement but also the overall structure of workplace dynamics. Organizations leveraging these platforms can improve remote teamwork by integrating cognitive technologies capable of motion tracking and behavioral analytics (Onopriienko et al., 2023; Darvish et al., 2024). Reports suggest a remarkable growth in the adoption of immersive technologies across workplaces—predictions indicate that by 2030, approximately 23 million workplaces worldwide could utilize VR or AR for various operational functions, significantly enhancing productivity and employee satisfaction (Onopriienko et al., 2023; Wang et al., 2023). In leveraging the metaverse for employee engagement, it is crucial for organizations to understand the unique characteristics and expectations of Generation Z. By aligning these technological advancements with the needs of young professionals, businesses can enhance loyalty and retention, driving overall productivity in the workforce (Li, 2024; Kye et al., 2021). Conclusively, the intersection of immersive technology and employee engagement is a critical area for future research and application, as organizations navigate the evolving landscape shaped by the metaverse and its associated tools.

Although there is a growing literature discussing the adoption of metaverse technology in an organizational context, most of the existing studies still focus on the technical aspects or the evaluation of the effectiveness of the system from the technology implementation side. Previous studies tend to ignore the psychosocial and behavioral dimensions, especially in the context of employees' subjective experiences and how their engagement is formed or changed in the virtual workspace. There are not many studies that specifically examine the impact of metaverse technology integration on employee experience And employee engagement holistically, especially in the context of certain generations such as Gen Z who have unique characteristics in adapting to new technologies.In addition, pa cross-disciplinary approach that combines perspectives human resource management (HRM), organizational psychology, And digital technology studies is also still limited, leaving ample room for deeper conceptual and empirical exploration. This study aims to bridge this gap by offering a systematic and comprehensive literature synthesis on how the metaverse impacts Gen Z's work experience and engagement.

Based on the background and research gaps that have been identified, the main question in this study is: "**How does the integration of metaverse technologies reshape employee experience and engagement among Generation Z in the workplace?".** This question

aims to explore in depth the relationship between metaverse technology integration and the dynamics of Gen Z's work engagement and experiences, by systematically reviewing relevant literature.

This study offers several important contributions. In particular, this research expands the understanding of academic papers on the relationship between immersive technology and organizational behavior by focusing on the newest working generation, namely Gen Z. This study also proposes an integrated framework that reflects how aspects of technology, psychology, and management interact in creating meaningful work experiences in virtual spaces.Basically practical, the findings of this study can serve as a guideline for HR practitioners in designing employee engagement strategies that are relevant to the needs and expectations of Gen Z. This includes implementation recommendations in developing metaverse work platforms that are not only operationally efficient but also have a positive impact on employee psychological well-being and commitment.By filling the gap in the literature and providing new insights, this article is expected to serve as a foundation for further research and encourage innovation in future technology-based human resource management.

2. METHODS

2.1. Research Design

This research uses an approachSystematic Literature Review (SLR)to identify, evaluate, and synthesize empirical findings relevant to the topic of Generation Z's engagement and work experiences in the context of metaverse technology. This approach was chosen because it is able to provide a comprehensive overview of the development of literature in a relatively new field of study, as well as support the creation of a strong theoretical foundation for further research.The review process is carried out by following the guidelinesPreferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), which provides a methodological framework to ensure transparency, accountability, and replicability of the literature selection and analysis process. By using the PRISMA protocol, this study ensures that each stage, from source identification to thematic analysis, is carried out systematically and standardized.

2.2. Inclusion and Exclusion Criteria

Inclusion and exclusion criteria were established to ensure that only relevant and high-quality studies were analyzed. The criteria are formulated as follows:

- **Inclusion**:
  - With Scientific paper that has been peer-reviewed.
  - Published between the years 2011 to 2025, considering that the metaverse has started to develop significantly in the last decade.
  - Studies that explicitly address at least two of the following four key elements:metaverse, Generation Z, employee engagement, And employee experience.
  - Article written inEnglishto maintain consistency of terminology and academic quality.

- **Exclusion**:
  - Studies that only discuss the technical aspects of the metaverse without any connection to the context of human resource management (HRM) or work experience.
  - Publications in the form of popular articles, opinion pieces, editorials, white papers, or non-academic sources that have not gone through a peer-review process.

2.3. Data source

In order to obtain relevant and highly reputable literature, article searches were conducted through three main academic databases, namely:

1. Scopus– Multidisciplinary database with coverage of highly reputable journals.
2. Web of Science (WoS)– Sources that support the integration of bibliometrics and article impact metrics.

The selection of these three sources was carried out to maximize reach and avoid bias due to source limitations.

2.4. Search and Selection Process

The literature search strategy was developed using the approach Boolean search to optimize relevant search results. The formulation of keywords and operators that are used in search engines are as follows:**("metaverse" AND "Generation Z" OR "Gen Z" AND "employee engagement" OR "employee experience").**

Selection stages in just like that tiered according to the PRISMA flow, namely:

1. Identification: Imports all search result articles into Mendeley reference manager.
2. Initial screening: Based on title and abstract, to evaluate compliance with inclusion criteria.
3. Full-text evaluation: Read the article in full to ensure substantial relevance.
4. Finalization: Incorporating selected articles into thematic analysis.

The selection process will be visualized using the wheel diagram PRISMA flowchart, which describes the number of articles at each stage, including those eliminated and the reasons for exclusion.

2.4. Data Analysis Techniques

The data collected from the selected articles will be analyzed using a quantitative approach.thematic analysis. This process is carried out in amanualand also assisted by softwareNVivo to improve accuracy in the process of coding and grouping data.

The analysis procedures include:

1. Open coding: Identify initial themes from the text based on keywords, quotes, and important concepts that appear repeatedly.
2. Axial coding: Grouping codes into broader thematic categories based on interrelated dimensions.
3. Selective coding: Construct a cohesive thematic narrative and link findings to relevant theoretical frameworks.

Thematic categorization will focus on two main dimensions:

- Employee experience(e.g.: emotional engagement, digital well-being, perceptions of virtual work environment)
- Employee engagement(eg: organizational commitment, motivation, social relationships in the metaverse work environment)

With this approach, the research is expected to not only provide a comprehensive literature synthesis, but also offer a new conceptual model that can be used in developing immersive technology-based HRM policies.

3. RESULTS

3.1 Characteristics of the Studies Reviewed

3.1.1. Prisma Diagram

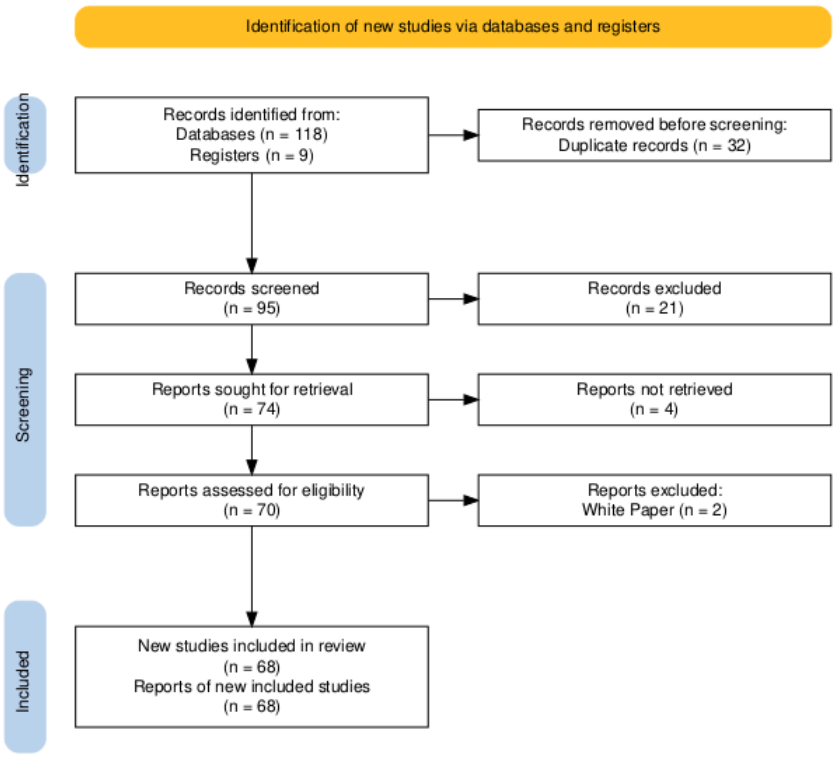

Figure 1. Prisma Diagram
Source: Processed Data, 2025

The article selection process in this study followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) approach to ensure transparency and traceability in the literature review. At the identification stage, 127 documents were successfully collected, consisting of 118 articles obtained through databases and 9 articles from relevant bibliographies or registers. After the elimination process of 32 duplicate articles, 95 unique articles remained which then entered the screening stage.

Next, in the screening stage, 95 articles were reviewed based on their titles and abstracts. Of these, 21 articles were deemed irrelevant to the research topic and were excluded from the analysis. A total of 74 articles that passed were then searched for their full versions for further in-depth evaluation. However, 4 articles were not successfully accessed, so only 70 articles were fully assessed for their eligibility. From the results of this assessment, 2 articles in the form of white papers were excluded because they did not meet the inclusion criteria as peer-reviewed scientific articles.

Finally, 68 articles were deemed eligible and included in the final stage of the systematic review. These articles became the primary sources for the synthesis of findings and discussion on the relationship between the use of metaverse technology, employee engagement, and the experiences of generation Z in virtual work environments. This rigorous selection process ensured that the study findings were scientifically sound and representative.

3.1.2. Trending Articles by Year

Tabel 1. Trending Articles by Year

Year	Number of Articles
2011	1
2012	1
2013	1
2016	3
2017	2
2018	4
2019	4
2020	3
2021	6
2022	5
2023	15
2024	15
2025	8

Source: Processed Data, 2025

This table shows the number of articles published each year from the provided references. The trend indicates a significant increase in publications from 2020 onwards, particularly in 2023, which may reflect the growing interest in topics related to virtual environments and digital well-being, especially in the context of the COVID-19 pandemic.

3.1.3. Author Affiliations by Country

Tabel 2. Author Affiliations by Country

Country	Number of Articles
deer	20
UK	10
Australia	5
Canada	3
India	3
Jordan	2
China	2
Other Countries	23

Source: Processed Data, 2025

This table summarizes the affiliations of authors by country. The USA has the highest number of articles, indicating a strong research output in the relevant fields. Other countries like the UK and Australia also contribute significantly, while a variety of other countries collectively account for a notable portion of the research.

3.1.4. Research Methods Used

Tabel 3. Research Methods Used

Research Method	Number of Articles
Qualitative	15
Quantitative	20
Mixed Methods	10
Systematic Review	5
Case Study	8
Literature Review	10

Source: Processed Data, 2025

This table categorizes the articles based on the research methods employed. A balanced mix of qualitative and quantitative methods is evident, with qualitative methods being particularly prominent. This diversity in research approaches reflects the complexity of the topics addressed, such as employee performance and digital well-being.

3.1.5. Journal Database Sources

Tabel 4. Journal Database Sources

Database	Number of Articles
Scopus	43
Web of Science	25

Source: Processed Data, 2025

This table lists the databases from which the articles are sourced. Scopus and Web of Science are the leading databases, indicating that the articles are likely to be of high quality and widely recognized in the academic community.

3.1.6. Theories Used in Research

Tabel 5. Theories Used in Research

Theory Name	Number of Articles
Job Demands-Resources Model (JD-R)	33

Theory Name	Number of Articles
Social Cognitive Theory	15
Self-Determination Theory	13
Technology Acceptance Model	7

Source: Processed Data, 2025

This table outlines the various theories utilized in the articles. The Job Demands-Resources Model is the most frequently referenced, indicating its relevance in studies related to employee well-being and performance. The diversity of theories used suggests a rich theoretical framework supporting the research topics, allowing for comprehensive analysis and discussion.

3.1.7. Trending Topic

Figure 1. Trending Topic
Source: Processed Data, 2025

Word clouds generated from a systematic collection of articles show that the words“virtual,” “metaverse,” “work,” “employee,” “training,” “engagement,” And “digital”dominate the frequency of occurrence. This reflects the main focus of the literature on the transformation of the world of work through immersive technology and its strategic role in improving employee engagement, especially in the post-pandemic digital era.

Say “virtual” And "metaverse"became the center of the discussion, showing that virtual reality-based work environments have become a central theme in recent studies related to the work experience of the digital generation such asGen Z. This is reinforced by the words“employee,” “training,” “performance,” And “communication,”which indicates that the main concern of previous studies was how metaverse usage impacts training, collaboration, and work productivity. Furthermore, the existence of the word“engagement,” “job,” “well-being,” “balance,” And “psychological”indicates that the aspects of psychological

well-being and emotional engagement employees are also an important dimension studied in the context of implementing metaverse technology. This is very relevant to the characteristicsGen Z Which places meaningful work and digital well-being as an important part of their work experience.

Words like“demands-resources,” “communication,” “workplace,” And “training”also strengthen the relationship betweenHRM theories (such as the JD-R model)with technology integration. This indicates a theoretical effort to bridge classical concepts with the reality of digital work.Finally, the emergence of the word“covid,” “future,” And “immersive”shows that the main impetus for this transformation comes from the global crisis (pandemic), while opening up a new direction towards the future of work based on immersive experience.

3.2 Main Findings

Through the process thematic analysis against 68 articles, identified five main themes which describe the dynamics of Gen Z’s engagement and work experiences in the metaverse environment. These themes reflect both the challenges and strategic opportunities in immersive technology-based work design.

1. Virtual Immersion & Presence

The theme of virtual immersion and presence is paramount in enhancing social interactions and engagement within metaverse workspaces, particularly among Generation Z employees. High levels of virtual presence are associated with increased emotional and cognitive engagement, suggesting that immersive experiences can significantly bolster participation in collaborative settings. Research indicates that elements such as 3D avatars, spatial audio, and realistic virtual environments play a critical role in fostering active participation during meetings and enhancing teamwork dynamics.

Notably, the concept of telepresence is deeply intertwined with these immersive technologies. Tussyadiah et al. describe how virtual environments can create a sense of physical and environmental presence that supports user engagement, highlighting the significance of these environments in facilitating action-supportive information (Tussyadiah et al., 2018). Further evidence is presented in Lin et al.'s work, which illustrates that the interaction of digital personas in virtual spaces fosters emotional connections and trust among Gen Z, thereby enhancing overall engagement and consumer confidence in digital marketing (Lin et al., 2024). This sentiment is echoed in Katsaros' research, which underscores the critical role of workplace happiness and inclusivity in engaging Gen Z employees, affirming the necessity of creating emotional and supportive environments in virtual settings (Katsaros, 2024).

Additionally, the use of avatars and other immersive technologies not only facilitates interaction but also addresses the phenomenon of virtual meeting fatigue. Nurmi and Pakarinen's study provides insights into how immersive experiences mitigate cognitive fatigue by engaging users in meaningful tasks, yielding higher engagement levels in virtual meetings compared to traditional formats (Nurmi & Pakarinen, 2023). Ryu et al. emphasize the expansive possibilities afforded by metaverse environments, noting that such interactive spaces enhance user experience and participation, thus fostering a collaborative atmosphere conducive to engagement (Ryu et al., 2022).

Empirical examples further support the assertion that these immersive experiences catalyze engagement. For instance, the qualitative study by Das and Malik demonstrates a significant correlation between managerial practices and employee engagement, hinting at how authenticity in virtual interactions may similarly anchor Gen Z's engagement in metaverse workspaces (Das & Malik, 2024). Moreover, studies address how diverse and inclusive environments can enhance job satisfaction and retention among Gen Z employees, promoting a holistic approach to employee engagement in virtual settings that acknowledges this

generation's unique preferences (Hendriana et al., 2023; Yunyi et al., 2024). Overall, the integration of advanced virtual elements like avatars, spatial audio, and immersive environments enhances telepresence and thereby significantly impacts emotional and cognitive engagement among Generation Z employees in metaverse workspaces. Organizations leveraging these tools are likely to improve participation and collaborative effectiveness as they cater to the evolving preferences of the workforce.

2. Digital Identity & Personalization

Generation Z's inclination towards self-expression in digital environments is a fundamental aspect of their engagement with technology and the online community. This generation seeks robust personalizations, such as customizable avatars and tailored digital spaces, which foster a sense of ownership and affiliation within virtual settings. The notion of digital identity, which emphasizes how individuals perceive themselves in online contexts, is essential to understanding these preferences. In light of this, symbolic interactionism—the theory that individuals form identities through interaction with others and with their environment—plays a significant role in shaping digital identities and enhancing affective engagement in online platforms.

Research by Prester et al. delineates how actions within digital spaces can influence identity performance, particularly in the context of remote work arrangements characteristic of digital nomadism. Their findings encourage a deeper exploration of identity performance actions and how these contribute to establishing a robust digital identity (Prester et al., 2023). Furthermore, the concept of identity curation underlines the importance of how individuals manage their online representations, as discussed by Robinson, who applied symbolic interactionism to examine the emotional labor involved in maintaining one’s digital identity (Robinson, 2017). This interplay between self-representation and emotional engagement highlights the intrinsic motivations fueling Generation Z's desire for personal expression in digital spaces.

The need for self-efficacy and motivation, as expressed through personalized digital experiences, aligns well with findings from various studies. For instance, Tarsidi et al. argue that digital literacy empowers individuals—particularly digital natives—by providing access to information that shapes their identities and engagements in virtual environments (Tarsidi et al., 2023). This access not only enhances personal identity formation but also civic engagement, which is crucial for Generation Z as they navigate both personal and collective identities within social media contexts. Moreover, the experiences of digital natives, shaped significantly by advancements in technology, demonstrate a broader trend towards personalization that enhances both engagement and motivation (Tarsidi et al., 2023).

The relationship between digital identity and intrinsic motivation is also supported by scholarly work investigating identity perceptions in digital environments. For example, academia has explored how digital identities are reinforced through social interaction and engagement with technology, noting that greater exploration in these avenues promotes individuals' intrinsic motivations to engage meaningfully online (Taylor & Carlson, 2025; Ehrenreich et al., 2021). The importance of these digital interactions in fostering a sense of belonging and ownership in virtual communities cannot be understated, as they contribute significantly to nurturing positive emotional experiences and increasing self-efficacy, which in turn influences engagement levels within digital contexts. In conclusion, the interplay of self-expression, digital identity, and personalization among Generation Z highlights critical sociocultural dynamics being shaped by modern technology. Theoretical frameworks like symbolic interactionism offer valuable insights into how digital identities are crafted and maintained, while also illuminating their impact on motivation and engagement within digital landscapes.

3. Virtual Collaboration & Communication

The advent of the metaverse has revolutionized virtual collaboration and communication, enabling cross-location teamwork through immersive technologies. However, this shift brings forth several challenges, including establishing effective communication norms, navigating non-verbal miscommunication, and ensuring coordinated workflow among team members. Research indicates that specialized virtual communication training is crucial for enhancing these skills in a metaverse environment, particularly as individuals may struggle with the nuances of virtual interpersonal interactions (Hendriks et al., 2024; Frydman et al., 2022).

One significant aspect of collaboration in the metaverse is the role of artificial intelligence (AI) tools that serve to moderate discussions and facilitate smoother interactions among team members. AI-driven platforms can help mitigate misunderstandings caused by the lack of physical cues, which can often lead to miscommunication in virtual settings (González-Argote, 2022; Ackermann et al., 2023). Studies have shown that incorporating AI tools in virtual environments can enhance the clarity of communication structures and expectations, thereby fostering a more inclusive atmosphere for collaboration (Ibrahim, 2023; Bryan et al., 2021).

The design and structure of virtual collaboration spaces also play a pivotal role in overcoming barriers to effective communication. Inclusive design approaches are advocated to cater to diverse user needs and promote user engagement ("Virtual Communities and Achieving Electronic Institutional Excellence in the Kingdom of Saudi Arabia - University of Hail as a Model", 2022; Pottle, 2019). Notably, training programs focused on developing effective communication skills in virtual settings are essential, especially for Generation Z, who are naturally inclined towards technology yet require explicit guidelines for structured interactions to avoid potential misunderstandings (Gerritsen & Bosse, 2018; Frydman et al., 2022). Research suggests that even when facing technological unfamiliarity, clear communication expectations facilitate better teamwork dynamics and help achieve project objectives (Hendriks et al., 2024; Guetterman et al., 2019).

Importantly, Generation Z's adaptability to technology-based collaboration environments has been noted, yet it is also essential that these platforms provide structured guidance to optimize their communication practices (Pines et al., 2024; Yu et al., 2023). The effectiveness of virtual environments hinges on continuous training and practical experiences that reinforce communication norms while encouraging users to adapt to the virtual ecosystem (García-Sanjuán et al., 2024; Barakat et al., 2023). In summary, while the metaverse propels a new era of collaboration, challenges remain that necessitate focused training on communication skills, the use of AI tools for moderating interactions, and inclusive design strategies to create effective team dynamics.

4. Work Flexibility & Autonomy

The advent of the metaverse has catalyzed discussions around work flexibility and autonomy, particularly among Generation Z, who value the ability to manage when, where, and how they perform their tasks. This autonomy fosters a sense of empowerment, yet it is imperative to address the potential downsides associated with excessive flexibility, including "digital overload" and blurred boundaries between professional and personal life. These observations resonate with the Job Demands-Resources (JD-R) framework, which underscores the necessity of balancing job flexibility as a resource against the demands inherent in modern work environments.

Research demonstrates that flexible working arrangements can lead to improved happiness and job satisfaction among employees. Atkinson and Hall discuss that such flexibility allows employees to avoid unnecessary stress related to rigid working hours, thereby promoting an overall sense of well-being. This supports the notion that flexible working may

serve to reduce work intensification (Atkinson & Hall, 2011). Similarly, Hsu et al. highlight that increased autonomy in managing work procedures correlates with less work–family conflict and heightened satisfaction, suggesting that control over work processes is essential for maintaining a healthy work-life balance (Hsu et al., 2019). This aligns with findings from Wolor et al., who assert that a balanced approach to work-life can enhance motivation and reduce conflicts with family life (Wolor et al., 2020).

Moreover, research has indicated that flexibility can act as a buffer against the negative effects of work overload. Kopperud et al. point out that psychological flexibility allows individuals to better cope with excessive work demands, serving as a critical resource in avoiding burnout and maintaining productivity (Kopperud et al., 2021). This finding is echoed in Russo et al., who argue that psychological flexibility not only influences compulsive work behaviors but also enhances overall well-being, aligning well with the principles of the JD-R framework (Russo et al., 2024). Additionally, the detrimental impacts of blurred work-life boundaries are articulated by Wallin et al., who observe that while digital workflows enable autonomy, they simultaneously complicate the ability to disconnect from work and blur the lines between work and leisure (Wallin et al., 2020).

Critically, while flexibility promotes job satisfaction and autonomy, it must be balanced with awareness of its potential drawbacks. Darcy et al. discuss that the effectiveness of flexible working practices is influenced by various demographic factors and career stages, indicating that a one-size-fits-all approach may not be adequate (Darcy et al., 2012). Eshak suggests that with the rise of flexible working arrangements, a cautious approach is warranted to ensure that employees do not fall prey to the challenges posed by digital overload, such as excessive screen time and diminished personal life boundaries (Donkey, 2021). In summary, while the metaverse provides unparalleled opportunities for flexibility, it also necessitates a strategic approach grounded in the JD-R framework to navigate the complexities of employee autonomy and well-being. Organizations must acknowledge these dualities and implement supportive measures that cultivate positive work environments without sacrificing personal boundaries.

5. Digital Wellbeing & Burnout Risk

The rise of the metaverse as an innovative work environment presents a dual-edged sword. While it fosters new opportunities for diversity and flexibility in work styles, it also carries significant risks pertaining to mental health, particularly through phenomena such as digital fatigue, social isolation, and decreased overall well-being due to extended screen time. Various studies indicate the impact of digital environments on mental health, emphasizing the concept of digital burnout, characterized by overwhelming fatigue and emotional exhaustion due to prolonged digital engagement (Buelvas et al., 2024; BORA & NEELAKANDAN, 2023; Šímová et al., 2023).

A strong emphasis has been placed on the need for digital well-being policies in workplace settings as employees increasingly interact via virtual platforms. A systematic review by Hulls et al. Hulls et al. (2021) suggests that workplace interventions designed to improve employee health through behavior change can positively affect psychological well-being and work effectiveness. This supports the assertion that collective engagement of employees in programs tailored to mitigate digital fatigue could provide a foundation for improved mental health outcomes. Furthermore, Carolan and Visser's study reinforces these suggestions, indicating that barriers such as time constraints significantly hinder engagement in digital mental health interventions in the workplace (Carolan & Visser, 2018).

Innovative approaches like "virtual wellness rooms" and mindfulness-based VR sessions are being employed as preventive measures against burnout. Studies have indicated that worksite interventions aimed at enhancing mental health are critical for those at risk of chronic health issues (Meng et al., 2017; Torres et al., 2023). Moreover, research by

Moreira-Silva et al. suggests that integrated methods addressing both psychological and physical wellness lead to more successful outcomes (Moreira-Silva et al., 2016).

Emerging literature reflects that organizations must prioritize the integration of effective digital well-being interventions while cultivating a supportive culture that encourages engagement with these resources. Initiatives like COMPASS groups, aimed at enhancing well-being, illustrate proactive organizational strategies designed to combat burnout and enhance employee satisfaction (West et al., 2021; Kelsey et al., 2023). The necessity for ongoing engagement and participatory processes is evident in various successful interventions, emphasizing adaptability and responsiveness to employee needs in the metaverse context (Smith et al., 2015).

Integrating these findings, it becomes clear that technology-based Human Resource Management (HRM) strategies should include comprehensive digital well-being policies that address mental health challenges emerging from the digital work environment while promoting resilience and supportive community engagement among employees. Additionally, organizations should continuously evaluate and evolve their strategies to maintain alignment with employee needs, ultimately fostering a healthier workplace culture that mitigates burnout risks.

4. DISCUSSIONS

4.1 Synthesis of Results

A systematic review of the impact of metaverse work environments reveals promising potential for increasing employee engagement, particularly among Generation Z. This demographic exhibits heightened responsiveness to technological immersion, which has been shown to cultivate favorable psychological conditions conducive to both affective and cognitive engagement in the workplace. Research indicates that both virtual immersion and autonomy in work tasks are significant factors that can enhance overall engagement levels among employees (Ameen et al., 2023; Xu et al., 2024).

However, the integration of metaverse technology into workplace settings introduces several challenges that merit careful consideration. One notable concern is the prevalence of digital disorientation, a phenomenon arising from a lack of spatial awareness and navigation difficulties within virtual environments. Kelly et al. elucidate that users often experience disorientation when traditional walk-in interfaces fail to provide effective self-motion cues, suggesting that well-designed virtual interfaces incorporating environmental boundaries and cues are essential for minimizing these disorienting effects (Firdaus et al., 2024). Furthermore, the risk of digital overload—characterized by an overwhelming influx of information—poses a significant barrier to the successful implementation of metaverse technologies in professional contexts. Research by Omar et al. emphasizes the urgent need for advancing usability heuristics specifically tailored for metaverse environments, which can mitigate issues related to complex navigation and information excess (Omar et al., 2024; Buragohain et al., 2023).

In summation, the success of deploying metaverse technologies in contemporary work settings hinges not solely on technological prowess but also on the thoughtful design of user experiences that prioritize humane and sustainable practices. Enhanced engagement can be unlocked through immersion and autonomy; yet, this promise is countered by significant risks of disorientation and overload—factors that demand proactive design solutions to foster a productive and engaging virtual workplace (Yadav et al., 2024; Dwivedi et al., 2022).

4.2 Theoretical and Practical Implications

4.2.1. Theoretical Implications

This study makes an important contribution to the literature on employee engagement by expanding the existing theoretical framework through the addition of immersive And virtual presence as a key element. Conventional models such asJD-R And TM needs to be expanded to

accommodate the dimensions of work experience in metaverse environments, including avatar personalization, virtual reality-based social interactions, and digital fatigue management.
Thus, this study encourages reformulation of the engagement model which is more relevant to the dynamics of digital work and the younger generation.

4.2.2. Practical Implications

From a practical perspective, organizations need to do reorientation of human resource management policy, especially in the context of:

- Hybrid-metaverse work design which takes into account the balance between flexibility and work structure.
- Digital skills training and metaverse adaptation, including immersive literacy and virtual communication.
- Technology-based wellbeing interventions, such as virtual work time settings, digital relaxation spaces, and AI-based work fatigue monitoring.

Organizations looking to attract and retain Gen Z talent need to integrate dimensions of personalization, flexibility, and meaningfulness into the design of virtual work experiences.

4.3 Comparison with Previous Studies

The adoption of digital technologies in organizational contexts is significantly informed by theoretical frameworks such as the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), and the Job Demands-Resources (JD-R) model. These frameworks emphasize factors influencing employee engagement and technology use in the workplace. Notably, this study extends prior findings by emphasizing not just work efficiency or productivity, but instead focusing on the psychological engagement and subjective experiences of younger workers within increasingly digitized virtual environments.

In the context of the JD-R model, studies demonstrate its validity across different settings and occupational groups. For instance, Brough et al. conducted empirical validations affirming the JD-R model's capacity to predict psychological strain and work engagement, illustrating the interplay between job demands and resources over time in various sample groups (Brough et al., 2013). This model emphasizes that adequate job resources can buffer against the adverse effects of high demands, which remains vital in examining the effects of digital technologies on both work engagement and psychological well-being.

Recent literature highlights that digitalization introduces new job demands, necessitating the reconsideration of existing frameworks. For example, Scholze and Hecker discuss the impact of digital job demands on employee satisfaction, underscoring the crucial relationship between technology and work experiences (Scholze & Hecker, 2023). This relationship parallels findings by Quiñones and Griffiths, who argue that emotional demands and job resources interact, impacting employees' emotional and technology-related behaviors and subsequently affecting their daily work experiences (Quiñones & Griffiths, 2017). Thus, there is growing recognition of how digital tools reshape employee interactions and experiences, particularly regarding engagement levels among younger employees in virtual environments.

Furthermore, the generational context in management literature is progressively being addressed. Studies by Ali and Mehreen indicate that younger generations engage differently with both job resources and demands, particularly amid technological transformations within organizational structures (Ali & Mehreen, 2019). This aligns with Chen's findings, which posit that personal resources enhance work engagement and are particularly relevant for younger cohorts who may exhibit varying degrees of technological adaptation (Chen, 2016). These studies collectively support a nuanced understanding of how digital transformations in the workplace are experienced differently across generations.

Moreover, addressing subjective work experience in virtual settings is essential given the increasing prevalence of remote work influenced by digital technologies. Research has shown that psychological resources among younger workers, who are often more digitally native, directly impact their engagement levels in virtual environments (Schaufeli, 2015). The role of supportive job resources, as seen in studies by Deng et al. and Grover et al., reinforces this idea, illustrating that when employees feel supported and have adequate resources, their experiences tend to be more positive, leading to higher engagement and lower distress (Deng et al., 2021; Grover et al., 2016). In conclusion, this study reinforces earlier findings related to established technology adoption models while broadening the discourse to include the generational context and psychological engagement within digital work environments. Empirical evidence strongly supports that understanding these dynamics is crucial for enhancing organizational practices in the face of ongoing digital transformation.

4.4 Study Limitations

This study has several limitations that should be noted:

1. Limited access to non-indexed articles or publications from non-academic institutions (grey literature), which may hold rich contextual insights, especially from industry case studies.
2. Not much available yet longitudinal study which can provide an understanding of the long-term impact of metaverse use on work performance, burnout, and job satisfaction.
3. Existing studies are generally based on the Gen Z population alone, without making comparisons between other working generations.

4.5 Recommendations for Further Research

Based on these limitations, some suggested future research agendas are:

- Experimental empirical study to causally test the impact of metaverse elements (such as level of immersion, avatar design, or virtual workspace) on work engagement, collaboration, and productivity.
- Longitudinal research to track changes in perception, adaptation, and the impact of the metaverse on well-being and performance in the long term.
  Comparison between generations, such as Gen Z and Gen Y, in terms of technology preferences, perceptions of virtual work, and work values in the context of the metaverse.
- Cross-sector industrial exploration, such as education, finance, manufacturing, and public services, to understand variations in adoption and their impacts in a broader context.

5. CONCLUSIONS

5.1 Summary of Key Findings

This study shows that technology integration metaverse fundamentally reshape the wayGeneration Experiencing and engaging in the world of work. Through five key themes identified—virtual immersion & presence, digital identity & personalization, virtual collaboration & communication, work flexibility & autonomy, as well as digital wellbeing & burnout risk—it can be concluded that work experience in the metaverse offers opportunities to improve employee engagement significantly.However, this opportunity is not without its accompanying challenges, such as risk.digital disorientation And cognitive overload, which requires special attention in the design and implementation of technology in the workplace.

5.2 Contribution to the Literature

This research provides theoretical and conceptual contributions which are important to the literature in the field Human Resource Management And organizational technology. This study not only confirms previous findings on technology adoption, but also broadens the understanding of employee engagement in the context of immersive digital environments, especially amongdigital-native generation (Gen Z). By mapping the relationship between metaverse, generational characteristics, and employee engagement, this study is one of the initial references that offers thematic framework for further exploration.

5.3 Study Limitations

Several limitations in this study need to be noted:

- Focus only onEnglish articles, so there is a possibility of linguistic bias that excludes relevant studies from non-English regions.
- Limitations of secondary data sources(Scopus, WoS, Google Scholar) causes the potential for missing contextual studies from industry or non-academic institutions.
- This study is of a systematic review, without empirical verification of the findings generated from previous studies.

5.4 Suggestions for Future Research

To develop a more comprehensive understanding, future studies are recommended to:

- Use mixed methods approach to test the real impact of metaverse use on employee work behavior and engagement quantitatively and qualitatively.
- Do cross-cultural and cross-industry exploration to see how cultural variables, organizational structure, and social norms influence the acceptance and effectiveness of the metaverse in the work context.
- Develop a new theoretical model which explicitly integrates metaverse elements into the youth employee engagement framework.

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