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ONLINE TRAINING IN THE WORKFORCE: A RECENT SYSTEMATIC REVIEW

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Abstract:

This systematic literature review explores the recent developments in online training within the workforce, highlighting its significance in fostering employee skills amid a digital transformation. Despite the increasing reliance on online training, organizations face persistent challenges, including engagement issues, varied digital literacy levels, and the effectiveness of training methods. To address these challenges, an extensive search of scholarly articles from reputable databases like Scopus and Web of Science was led, focusing exclusively on studies published in 2024, and following the PRISMA framework. The search yielded 27 articles deemed as final primary data, all of which were thoroughly analyzed. The findings were organized into three main themes: (1) Innovative Training Approaches and Technologies, (2) e-HRM Practices and Organizational Development, and (3) Online Training and Employee Well-being. The findings reveal that the use of the training strategies enhances the performance of the workers; 75% of the research revealed that satisfaction and retention levels rise. However, challenges such as adequate technical support and the need to develop content specific to the targeted learners' needs continue to hinder the achievement of the best results in training. Thus, the effectiveness of online training as a tool for increasing the workforce's capabilities is high; however, to implement the potential of this approach, it is necessary to solve the problems considered above. Subsequent studies should explore the long-term outcomes of online training and the new development of methodologies in order to gain more depth and insight into the area of organizational application.

Keywords:

Online Training, Workforce

Introduction

Due to fast progression of information technologies, the training of the workforce has undergone essential changes, and therefore, online training has become a more significant aspect of continuing education. Online training, a subcategory of e-learning, entails numerous educational possibilities that are unique and varied. Attributable to the flexibility offered by this approach of training, trainees can afford to work on customized training programs at their own time and place, hence the disconnection of time, place, and space between trainers and trainees (Lim et al., 2007). The antecedent factors that have a bearing on the success of online training can be divided into individual, organizational and training design variables which facilitate learning and transfer of training performance in the workplace (Esha et al., 2023; Fahmy & Abdulmajeed Attia, 2024; Shirmila & R, 2022; Shukla et al., 2023). Owing to the growing role of the digital economy, the use of e-learning for training highly qualified personnel as part of the concept of the development of human resources is becoming critical in the context of preparation for the 21st century (Pantazis, 2002).

Another advantage of online training, which has probably contributed to the successes mentioned above, is the fact that it is easier to tailor training interventions to the characteristics of the trainees. This level of customization is important in enhancing learner interactions and making the training as relevant as possible a factor that is critical given the high dropout rates that have been observed to be rampant in online workforce training (Fake & Dabbagh, 2020). Personalization of learning has been found to increase the learning relevance and efficacy of training, particularly when implemented within the workforce education setting, even though it is still under development (Badoi-Hammami, 2023; Dalleck et al., 2016; Sinnema et al., 2015). For example, the integration of contextualized teaching and learning (CTL) into the training strategies for online training could also delve deeper to optimize the use of basic skills in occupations as well as to increase access and interest among non-traditional trainees (Mohammadi et al., 2020). This paper also shows how educational technology affects learning in the workplace and how this positively impacts the organization (Hilliard, 2015), (Damilola Emmanuel Ogedengbe et al., 2024), (Barmada & Baghaei, 2018). The literature reveals that technology-assisted training enhances the level of professional knowledge and learning effectiveness of the employees and organizational effectiveness (Zhang et al., 2023). Hence, this work supports the incorporation of educational technology in the training of employees and workforce development to increase the competency of the employees and the resultant organizational performance.

Literature Review

The increase in the use of online training in the workplace is attributed to a growing need for affordable and efficient methods of attaining work-related skills in multiple fields. The current studies underlined the significance of online training in the domains that include inclusive education, mental health, healthcare, and human resource management (Montalbano et al., 2024), (Dennis et al., 2024), (Bitrián et al., 2024), (Alhelal & Abdelwahed, 2024). In their research, Montalbano et al., 2024 showed the effectiveness of virtual training in increasing school professionals' knowledge regarding inclusive practices and the importance of online professional development. On the other hand, others such as Dennis et al., 2024 and Bitrián et al., 2024 showed that this kind of online training increases user interest and learning as well as knowledge enhancement in areas that need enhanced skills, including social work and information security. Electronic Human Resource Management (e-HRM) systems, particularly in private and educational sectors, present a noteworthy trend. Alhelal & Abdelwahed, 2024

found that e-HRM positively affects organizational outcomes, especially through e-training and e-performance appraisal, while highlighting the limited impact of e-recruitment on workforce development. Their findings indicate a need for tailored HR practices that cater specifically to different organizational requirements. In a higher education setting, Herzallah & Ayyash, 2024 reported that e-HRM practices improved institutional efficiency, though their study's focus on a single institution calls for expanded research across diverse settings. Additional insights from Rawashdeh et al., 2024 emphasized e-HRM's dependence on a robust technological infrastructure, underscoring the challenges faced in regions with limited technological capabilities.

Work-from-home (WFH) and remote models influenced by e-HRM or digital HRM practices further demonstrate the transformative role of online training in workforce adaptation. Pham et al., 2024 found that digital HRM practices, except for digital recruitment, improved employee adaptability to remote work, underscoring the need for comprehensive digital training that prepares employees for remote job demands. The COVID-19 pandemic's role in reshaping training needs is evident in studies by King et al., 2024 and Lathabhavan & Griffiths, 2024, who explored how rural healthcare settings and small and medium-sized enterprises (SMEs) in India leveraged digital training for continuity. These studies highlight the critical role of online training during crises while emphasizing the importance of support networks and resilience. Economic disruptions due to crises like the pandemic and the energy crisis have reshaped online training's role in workforce development (del Val Núñez et al., 2024). Dauth & Lang, 2024 reported that general interest in continuing vocational training (CVT) declined. However, interest in online CVT increased, showing a shift in how employees approach skill acquisition during uncertain times. Studies such as Mourelatos et al., 2024 illustrated that workers are willing to accept lower wages for online training opportunities, highlighting online training's value during economic downturns while raising concerns about labour equity.

In healthcare and law, Krutilova et al., 2024 demonstrated that interactive online modules for gestational diabetes education significantly improved healthcare workers' knowledge, yet the small sample size limits the findings' generalizability. Mental health-focused online training programs, such as Cerulli et al., 2024's IPV hotline training, emphasized the necessity of personalized engagement strategies to increase participation. However, the study noted the absence of long-term assessment of hotline workers' suicide prevention skills. The call for more substantial research on the sustained behavioral impact of online mental health training is echoed in studies by de Wit et al., 2024, who investigated trauma-informed interventions for mental health professionals. Specialized fields such as elder law and social work benefit uniquely from online training, addressing specific societal needs. Ries & Johnston, 2024 showed that online dementia training for lawyers has the potential to enhance their skills when working with dementia-affected clients. In social work, Dennis et al., 2024 highlighted online simulations with actors, replicating real-life scenarios to teach professionals critical skills for working with at-risk families. However, both studies underlined limitations in virtual training's ability to fully replicate in-person depth, suggesting a possible benefit from hybrid models that combine online and offline methods.

The domain of leadership and management development, as well as employee well-being, also reveals a promising yet complex picture. Van Leeuwen et al. (van Leeuwen et al., 2024a) indicated that structured, reflective online training can enhance people-management skills in healthcare. Meanwhile, Decius et al., 2024 identified self-regulated and informal learning as

key components for improving employability. Their findings suggested that formal online training methods might not have a significant impact on professional development, pointing to the need for more adaptive training structures that align closely with employees' career aspirations and workplace demands. Additionally, Tobias et al., 2024 revealed that online training interventions positively impact managerial coaching behaviours but recommend further studies to enhance methodological rigor in evaluating these training outcomes. Bilderback et al., 2024 demonstrated that virtual training aligned with Sustainable Development Goals (SDGs) can foster inclusivity and collaboration, emphasizing the relevance of digital platforms in supporting post-pandemic recovery. However, the long-term sustainability and integration of such initiatives within corporate frameworks remain uncertain.

Advanced technologies, such as virtual reality (VR), present an evolving trend in online workforce training. Studies by Keningale et al., 2024 and Zerguine, Johnston, et al., 2024 showed that VR enhances engagement and realism in fields requiring high-intensity training, such as police work and ergonomic practices. However, discomfort and disorientation associated with VR indicate a need for more refined methods, specifically in applications which require high levels of precision. Rafa et al., 2024 supported the use of VR to supplement the gap between theory and practical as it relates to technical training while affirming that VR has become increasingly important in skills acquisition.

In conclusion, while there are countless benefits to online training in the workforce, including flexibility and access, some issues are still clearly apparent. These studies underscore the significance of online training as a transformative tool for workforce development. Addressing the issues involved in implementing it is essential for inclusive and effective online training programs.

Methodology

Formulation of Research Questions

Research questions are essential in a Systematic Literature Review (SLR) as they provide the framework and orientation for the review process. A well-formulated research question reduces the potential for bias and ensures a thorough understanding of the available evidence. In this study, the PICO framework, a mnemonic tool particularly effective in qualitative research, was employed to develop the research questions. Proposed by Lockwood et al., 2015, PICO stands for Population, Interest, and Context. This approach ensures the research is focused and the questions are well-defined, simplifying both the literature search and study design. This study achieved three research questions as below:

1. How do innovative training technologies impact the professional development and skill enhancement of employees within organizations adopting online training programs?
2. What role does e-HRM play in supporting workforce development in organizations undergoing digital transformation through online training initiatives?
3. How does the shift to online training influence the well-being of employees?

Review Protocol - PRISMA

In SLR, the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) method is a commonly recognized standard that ensures transparency, completeness, and

consistency in the whole process (Page et al., 2021). The framework consists of four main stages: identification, screening, eligibility, and data abstraction.

Identification

The identification phase represents the initial step in the SLR process. Comprehensive searches are conducted in Scopus and Web of Science (WoS) due to their extensive coverage and high-quality academic research. Keywords tailored to online training and workforce are used based on comparable terms using dictionaries, thesaurus, and past studies. Thus, 1,101 papers were identified through Scopus, while 749 records were retrieved from WoS totalling 1,850 records. The total papers provide a strong basis for further stages of the review.

TABLE 1: The Search String

Scopus Date of Access: October 2024	TITLE-ABS-KEY (("Online train*" OR "e-train*" OR "virtual train*" OR "electronic train*" OR "digital train*" OR "remote train*") AND ("workforce" OR "employee*" OR "human resource*" OR "worker*" OR "labo#r force" OR "manpower")) AND (LIMIT-TO (PUBYEAR , 2024)) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (PUBSTAGE , "final")) AND (LIMIT-TO (SRCTYPE , "j")) AND (LIMIT-TO (LANGUAGE , "English"))
WoS Date of Access: October 2024	("Online train*" OR "e-train*" OR "virtual train*" OR "electronic train*" OR "digital train*" OR "remote train*") AND ("workforce" OR "employee*" OR "human resource*" OR "worker*" OR "labo#r force" OR "manpower") (Topic) and Article (Document Types) and English (Languages) and 2024 (Publication Years)

Screening

The first stage of the screening excluded 1707 publications, leaving 143 papers screened based on different exclusion and inclusion criteria of this study. The first criterion utilised was literature (research articles) as it is the primary source of practical recommendations. While reviews, meta-synthesis, meta-analyses, books, book series, chapters, and conference proceedings were excluded. The review was confined to publications in English and the year 2024 only. In all, 38 publications were rejected based on duplication criteria.

TABLE 2: The Selection Criteria

Criterion	Inclusion	Exclusion
Language	English	Non-English
Time line	2024	< 2024
Literature type	Journal (Article)	Conference papers, Book, Review, Editorials
Publication Stage	Final	In Press

Eligibility

A total of 105 articles were scrutinized for inclusion in the eligibility phase. Each article's title, abstract, and key content were carefully examined to ensure alignment with the study's research objectives and compliance with the predefined inclusion criteria. This step focused on the relevance of titles, the alignment of abstracts with the research goals,

and the availability of full-text articles containing empirical evidence. As a result, 78 articles were excluded. Consequently, a total of 27 articles met all the inclusion criteria and were selected for further in-depth review in the SLR.

Data Abstraction and Analysis

In this stage, the primary objective was to identify relevant topics within the scope of the research. The process began with the data collection stage, which served as the foundation for developing key themes. As shown in Figure 1, the authors conducted a thorough review of 27 selected articles, carefully analysing each for content related to the study's focus.

TABLE 3: Number and Details of Selected Articles Database

No.	Authors	Journal	Scopus	WoS
1.	Montalbano et al., 2024	Education Sciences	/	
2.	Bitrián et al., 2024	Journal of Business Research	/	
3.	Alhelal & Abdelwahed, 2024	Corporate and Business Strategy Review	/	
4.	Dennis et al., 2024	Applied Theatre Research	/	/
5.	Krutilova et al., 2024	BMC Medical Education	/	
6.	Cerulli et al., 2024	Journal of Family Violence	/	
7.	Herzallah & Ayyash, 2024	International Journal of Business Performance Management	/	/
8.	van Leeuwen et al., 2024	Public Personnel Management	/	
9.	Jones et al., 2024	Journal of Workplace Learning	/	/
10.	Korlipara & Shah, 2024	European Journal of Training and Development	/	
11.	Decius et al., 2024	European Journal of Work and Organizational Psychology	/	
12.	Tobias et al., 2024	Journal of Happiness Studies	/	/
13.	Lathabhavan & Griffiths, 2024	International Journal of Manpower	/	
14.	del Val Núñez et al., 2024	Technological Forecasting and Social Change	/	/
15.	Zerguine, Healy, et al., 2024	Applied Ergonomics	/	
16.	Keningale et al., 2024	Policing (Oxford)	/	/
17.	Firk et al., 2024	Journal of Management Accounting Research	/	/
18.	King et al., 2024	Journal of Integrated Care	/	
19.	Lathabhavan & Kuppusamy, 2024	International Journal of Productivity and Performance Management	/	
20.	Rafa et al., 2024	Human Factors and Ergonomics in Manufacturing and Service Industries	/	/
21.	Lane et al., 2024	Organization Science	/	
22.	Hussein & Jaaffar, 2024	International Journal of Management and Sustainability	/	
23.	Dauth & Lang, 2024	Journal for Labour Market Research	/	
24.	de Wit et al., 2024	Journal of Mental Health Training, Education and Practice	/	/

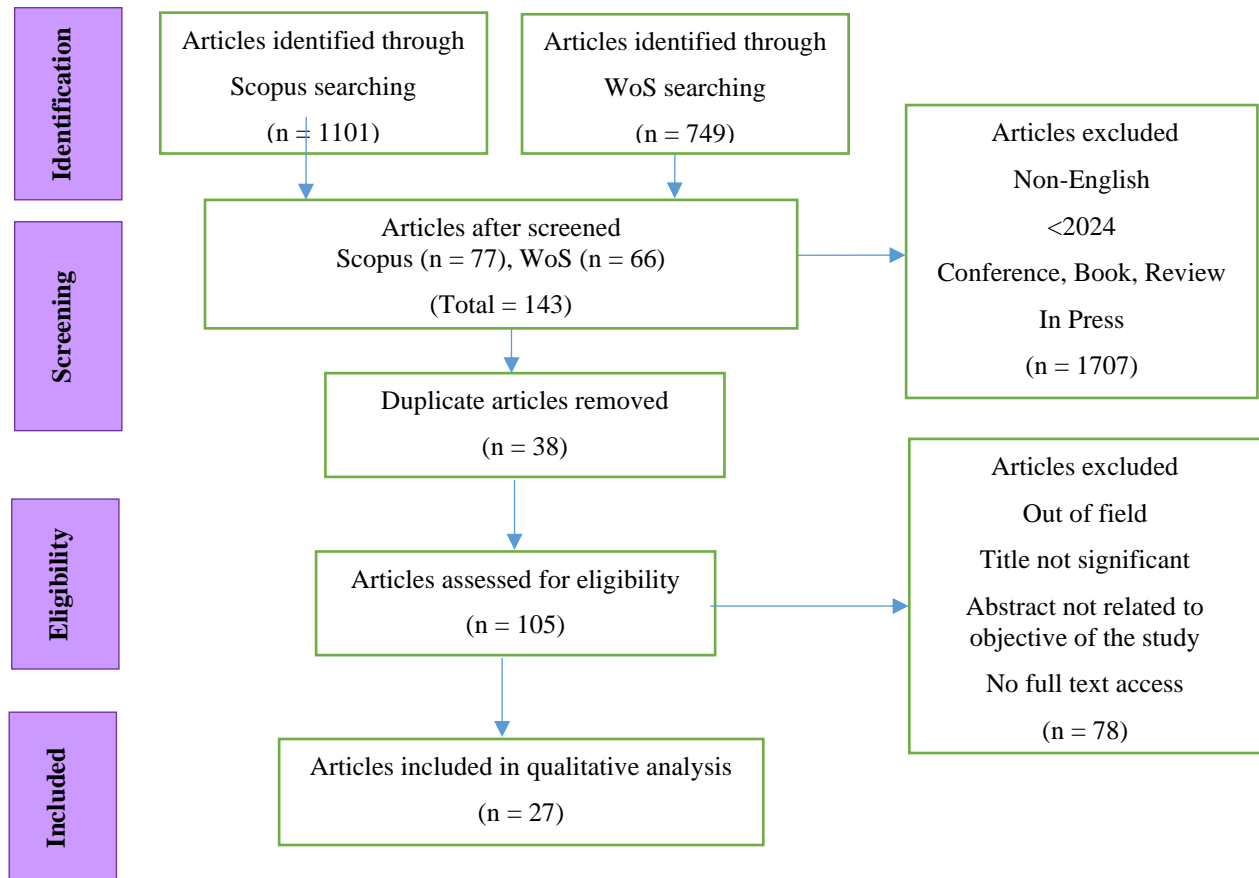
No.	Authors	Journal	Scopus	WoS
25.	Rawashdeh et al., 2024	Pakistan Journal of Life and Social Sciences	/	
26.	Elsayary et al., 2024	Turkish Online Journal of Distance Education	/	
27.	Calder et al., 2024	Drugs: Education, Prevention and Policy	/	

Quality Appraisal

In accordance with the guidelines established by Kitchenham, 2007, following the selection of Primary Studies (PS), it is essential to evaluate the quality of the research presented and to perform a quantitative comparison. This study utilizes the Quality Assessment (QA) framework proposed by Abouzahra et al., 2020, which includes six Quality Assessment criteria. The evaluation process for each criterion was; "Yes" (Y) = 1 when the criterion is fully met; "Partly" (P) = 0.5 when the criterion is partially satisfied or "No" (N) = 0 when the criterion is not met at all.

- QA1. Is the purpose of the study clearly stated?
- QA2. Is the interest and the usefulness of the work clearly presented?
- QA3. Is the study methodology clearly established?
- QA4. Are the concepts of the approach clearly defined?
- QA5. Is the work compared and measured with other similar work?
- QA6. Are the limitations of the work clearly mentioned?

Table 4 presents the QA process employed. Three experts conduct the independently and the scores are aggregated across all experts to calculate the overall rating. To qualify for the next stage of the process, the total score must exceed 3.0.

**FIGURE 1: Flow Diagram of the Searching Study**

Source: (Moher et al., 2009)

Result and Finding

Table 4 shows the result of quality assessment for 27 selected PS.

TABLE 4: Quality Assessment of PS

ID	QA1	QA2	QA3	QA4	QA5	QA6	Total Mark	Percentage (%)	Theme
PS1 (Montalbano et al., 2024)	1	1	1	0.5	0.5	0.5	4.5	75.0	Online Training and Employee Well-being
PS2 (Bitrián et al., 2024)	1	1	1	1	1	1	6	100.0	Innovative Training Approaches and Technologies
PS3 (Alhelal & Abdelwahed, 2024)	1	1	0.5	0.5	0.5	0.5	4	66.7	e-HRM Practices and Organizational Development
PS4 (Dennis et al., 2024)	1	1	0.5	1	0.5	0.5	4.5	75.0	Innovative Training Approaches and Technologies
PS5 (Krutilova et al., 2024)	1	1	1	1	0.5	0.5	5	83.3	Innovative Training Approaches and Technologies

ID	QA1	QA2	QA3	QA4	QA5	QA6	Total Mark	Percentage (%)	Theme
PS6 (Cerulli et al., 2024)	1	1	1	1	0.5	0.5	5	83.3	Online Training and Employee Well-being
PS7 (Herzallah & Ayyash, 2024)	1	1	1	0.5	0.5	0.5	4.5	75.0	e-HRM Practices and Organizational Development
PS8 (van Leeuwen et al., 2024b)	1	1	1	1	0.5	0.5	5	83.3	Innovative Training Approaches and Technologies
PS9 (Jones et al., 2024)	1	1	1	1	0.5	0	4.5	75.0	Innovative Training Approaches and Technologies
PS10 (Korlipara & Shah, 2024)	1	1	0.5	1	0.5	0.5	4.5	75.0	Innovative Training Approaches and Technologies
PS11 (Decius et al., 2024)	1	1	1	1	0.5	0.5	5	83.3	Online Training and Employee Well-being
PS12 (Tobias et al., 2024)	1	1	1	0.5	0.5	0	4	66.6	Online Training and Employee Well-being
PS13 (Lathabhavan & Griffiths, 2024)	1	1	1	1	0.5	1	5.5	91.6	Online Training and Employee Well-being
PS14 (del Val Núñez et al., 2024)	1	1	1	0.5	0.5	0.5	4.5	75.0	e-HRM Practices and Organizational Development
PS15 (Zerguine, Healy, et al., 2024)	1	1	1	0.5	0	0.5	4	66.7	Innovative Training Approaches and Technologies
PS16 (Keningale et al., 2024)	1	1	1	1	0.5	1	5.5	91.7	Innovative Training Approaches and Technologies
PS17 (Firk et al., 2024)	1	1	1	1	0.5	0.5	5	83.3	Online Training and Employee Well-being
PS18 (King et al., 2024)	1	1	0.5	0.5	0.5	1	4.5	75.0	Online Training and Employee Well-being
PS19 (Lathabhavan & Kuppusamy, 2024)	1	1	1	1	0.5	0.5	5	83.3	Online Training and Employee Well-being
PS20 (Rafa et al., 2024)	1	1	1	0.5	0.5	0.5	4.5	75.0	Innovative Training Approaches and Technologies
PS21 (Lane et al., 2024)	1	1	1	1	1	1	6	100.0	Online Training and Employee Well-being
PS22 (Hussein & Jaaffar, 2024)	1	1	1	1	0.5	0	4.5	75.0	e-HRM Practices and Organizational Development
PS23	1	1	1	0.5	1	0	4.5	75.0	Online Training and Employee Well-being

ID	QA1	QA2	QA3	QA4	QA5	QA6	Total Mark	Percentage (%)	Theme
(Dauth & Lang, 2024) PS24									Online Training and Employee Well-being
(de Wit et al., 2024) PS25	1	1	0.5	1	0.5	1	5	83.3	Online Training and Employee Well-being
(Rawashdeh et al., 2024) PS26	1	1	1	1	0.5	0.5	5	83.3	e-HRM Practices and Organizational Development
(Elsayary et al., 2024) PS27	1	1	1	1	1	1	6	100.0	Online Training and Employee Well-being
(Calder et al., 2024)	1	1	1	1	0.5	0.5	5.5	91.7	Innovative Training Approaches and Technologies

The PS assessment identified three themes. The analysis was carried out to determine the validity of the problems by two experts. The authors also compared the findings to resolve any discrepancies in the theme-creation process. Note that if any inconsistencies in the themes arose, the authors addressed them with one another. Adjustments based on feedback and comments by experts have been made.

Innovative Training Approaches and Technologies

The implementation of innovative training approaches, including gamification, interactive modules, and simulation technologies, has notably enhanced the effectiveness of online workforce training. Bitrián et al., 2024 highlighted that gamified e-training systems not only improve information quality and user satisfaction but also significantly bolster employees' self-efficacy. Similarly, Krutilova et al., 2024 found that interactive training modules substantially increased participants' knowledge and self-efficacy in providing diabetes education. These studies collectively emphasize the critical role of well-structured, engaging online platforms in enhancing learners' skills and confidence. Dennis et al., 2024 discussed the challenges and solutions associated with using actors for live simulations in social work training, demonstrating how virtual environments can effectively replicate real-life scenarios. At the same time, van Leeuwen et al., 2024 designed an online program for increasing people management behaviour of those who are oriented to a career in an organisation and found that methodical approaches to design and reflection can contribute to better leadership results. These studies show that online training helps to increase employees' efficiency in handling extended tasks, hence improving organisational performance.

New approaches in online training include VR, non-violent communication (NVC), and mental health kits which have proved at different levels of success in workforce online training. Jones et al., 2024 found that an online mental health toolkit significantly improved employees' resilience and coping mechanisms, leading to enhanced well-being and reduced stress levels. Similarly, Korlipara & Shah, 2024 demonstrated that NVC training fostered a sustainable shift in communication behaviours. VR technology has emerged as a promising method for training programs, providing immersive and engaging learning environments. Keningale et al., 2024 evaluated police Cardiopulmonary Resuscitation (CPR) training programs using VR and found that while test outcomes paralleled traditional classroom training, the immersive nature of VR increased participant engagement and realism. Additionally, Zerguine, Healy, et al., 2024

highlighted the development of an e-guide for sit-stand workstations that emphasized behaviour change and ergonomics through co-design and interactive learning. Both VR and user-centered design (UCD) approaches have made notable impacts on workforce development, particularly in specialized sectors. Rafa et al., 2024 explored the application of VR in additive manufacturing education, revealing that VR training environments offer immersive experiences that enhance practical skills. Similarly, Calder et al., 2024 emphasized the value of UCD in optimizing online learning for professionals in substance use treatment, suggesting that a tailored approach could better address both practical and professional development needs. These outcomes suggest that the effective use of new learning paradigms is contingent on their ability to align with the learner contexts and the integration of the end-users' feedback to increase engagement and efficacy.

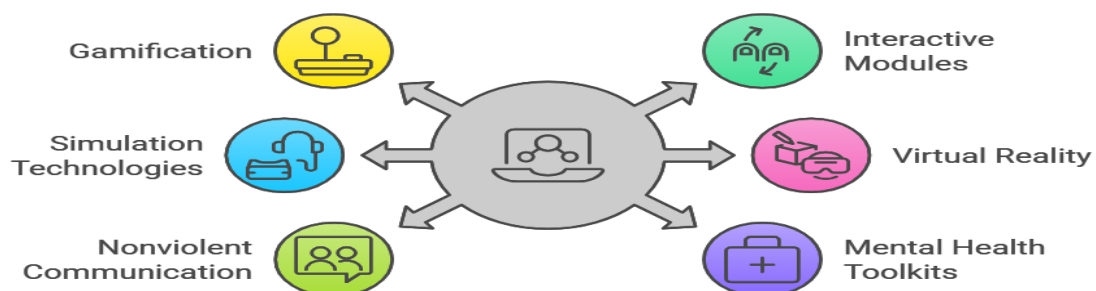


FIGURE 2: Innovative Training Approaches and Technologies

e-HRM Practices and Organizational Development

The implementation of e-HRM practices in organizational frameworks has been valued a lot in the recent past, especially in the course of organizational development (OD). Research conducted by Alhelal & Abdelwahed, 2024, Herzallah & Ayyash, 2024 and Hussein & Jaaffar, 2024 have explored the ways in which e-HRM can support performance and growth in organizations of different industries. In this context, Alhelal & Abdelwahed, 2024 examined the interaction between e-HRM subsystems, specifically e-training and e-performance appraisal, and their influence on OD in Saudi Arabia's private sector companies. They also established that e-HRM implementation, particularly e-training and e-performance appraisal, has a positive impact on organizational development. Regarding the higher education sector, Herzallah & Ayyash, 2024 examined the effect of e-HRM practices on organizational performance in Palestine Technical University-Kadoorie. Their research proved that activities including e-selection, e-training, e-performance appraisal, and e-communication enhance organizational performance. The research results implied that through e-HRM processes, educational organizations can further a strategic advantage and enhance organizational efficiency. Hussein & Jaaffar, 2024 also extended this literature by investigating the relationship between e-HRM and the performance of academic staff in Amman universities, where trust is argued to mediate this relationship between e-HRM and academic staff performance. This implied that to optimise the e-HRM practices in education, establishing trust is essential as a key element.

Furthermore, Rawashdeh et al., 2024 revealed that information technology capability is a moderator between e-HRM practices and perceived organizational performance among Jordanian private universities. According to their findings, the studies showed that some e-HRM practices have a direct impact on organizational performance, and the strong IT capacity

has a moderating effect on these relationships. Managers are also urged to approach e-HRM as a strategic process, at the same time, they must ensure they have adequate technological infrastructure to underpin such efforts.

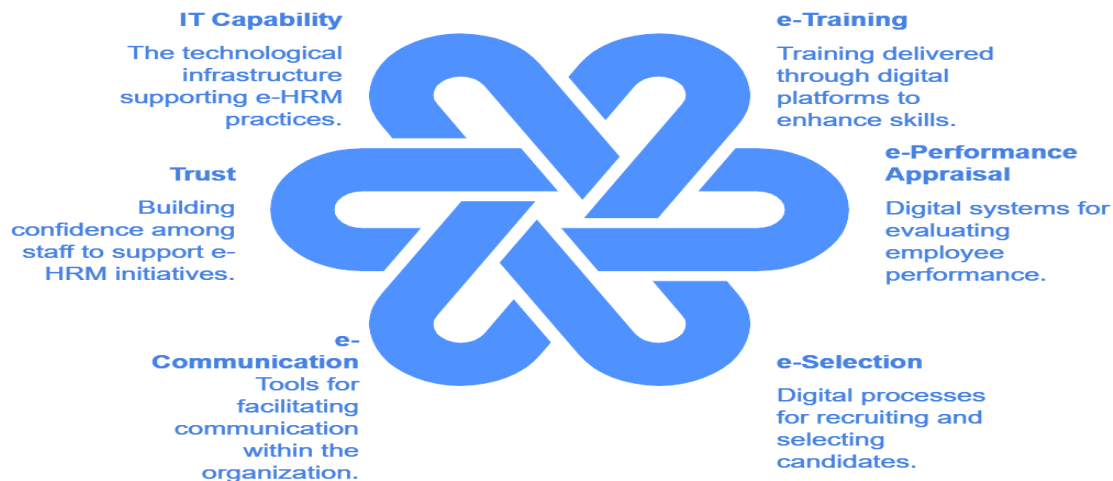


FIGURE 3: e-HRM Practices and Organizational Development

Online Training and Employee Well-being

The theme of online training concerning employee well-being has garnered significant attention in recent research. Montalbano et al., 2024 demonstrated that online training improved professionals' knowledge of inclusive education practices. This is consistent with Cerulli et al., 2024, who focused on the effectiveness of an online suicide prevention training program for intimate partner violence hotline workers. Their randomized control trial revealed that personalized dissemination methods led to higher participation rates. Decius et al., 2024 examined the varying impacts of different forms of work-related learning on perceived employability, emphasizing the complex nature of learning's role in mental health and career development. Their research illustrated that informal and self-regulated learning positively influences internal employability, while formal learning shows negligible effects. Lane et al., 2024 explored how gender stereotypes influence recruiter decisions when recruiters tend to contact male prospects more frequently than female ones. These findings suggested that gender biases may undermine diversity efforts in online training programs, raising the need for interventions to address these disparities. In the context of managerial coaching, the study by Tobias et al., 2024 supported the role of online training in fostering supportive workplace environments. Their research indicated that strengths-based coaching interventions positively influenced managerial behaviours. These studies advocated for the integration of effective online training programs to bolster both professional development and employee well-being.

COVID-19 pandemic boosted online training. Lathabhavan & Griffiths, 2024 highlighted the influence of technology, managerial support, and peer support on self-efficacy, which enhances job satisfaction and work engagement among employees working from home. Their findings suggested that effective online training, coupled with supportive management and collegial relationships, can mitigate technostress, promoting a more resilient workforce. Similarly, Firk et al., 2024 addressed the phenomenon of digital anxiety among finance employees during digital transformation. Their study provided evidence of both the effect of digital anxiety on work engagement and the reduction of such effect by participation in digital training and

supportive leadership. King et al., 2024 stressed that remote and rural staff adaptations, like hybrid working and online training, should continue to be sustained because they have a positive impact on employee turnover rates and patient care. This is in consonance with Lathabhavan & Kuppusamy, 2024 who had it that digital leadership and training is important for e-employee enablement in small and medium-sized enterprises (SMEs). de Wit et al., 2024 rightly focused on an online training program for mental health workers (MHWs) in India during the pandemic and the focus was on trauma-informed interventions. They found that there was a significant need for MHWs to treat trauma symptoms and stress levels, which built their confidence and professionalism. Another significant finding of the present research is that the study by Elsayary et al., 2024 focused on exploring teachers' perceptions of online professional development during the pandemic. The results showed that technology-enhanced virtual communication enhanced the level of technology adoption by teachers. This correlated with Dauth & Lang, 2024, who pointed out that external factors, including economic uncertainty, influenced vocational training interest. With respect to the second research question, the type of training, which included its flexibility and online nature, turned out to be highly important when explaining the maintenance of workforce readiness and psychological well-being in periods of crisis.

In conclusion, the reviewed literature reflects a positive correlation between online training programs and well-being of employees. The results highlight the need for evidenced-based, trauma-sensitive training that improves content knowledge as well as the ability to practice self-care.

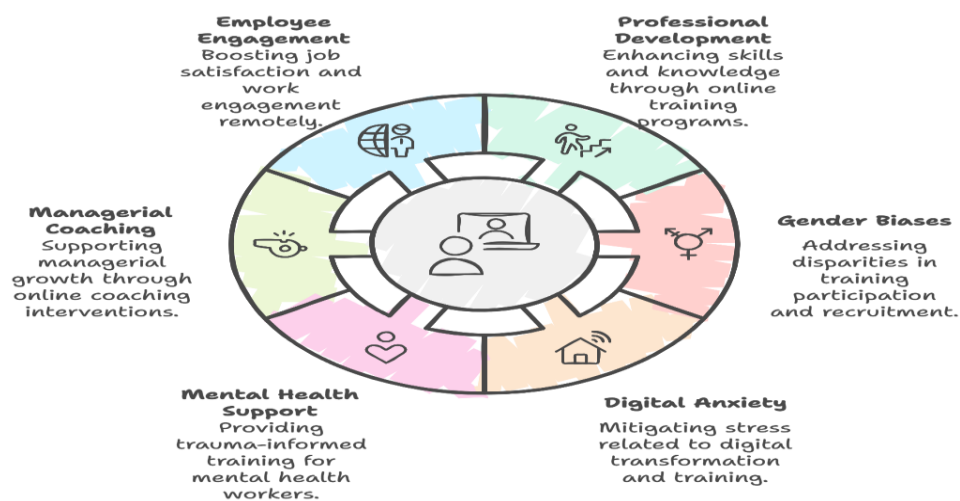


FIGURE 4: Online Training and Employee Well-being

Discussion and Conclusion

The novel approach to training like gamification and interactional modules, have enhanced the effectiveness of online training in the workplace. Also, gamified e-training doesn't only improve the quality of provided information but also increases the satisfaction and trust of the employees in fulfilling their tasks. The same applies to the interactive training modules that have been proven to enhance knowledge retention as well as self-efficacy. The adoption of online training in social work and leadership development will just enhance the effectiveness of the innovative methods. The problems associated with the use of live simulations in training social workers have been cited earlier, and it has been established that virtual environments can

provide realistic experiences. Consequently, the usage of methods like VR has been associated with increased attendance and perseverance of employees.

It has been found that the adoption of e-HRM practices within organizational systems has become of interest, especially in line with organizational development. There is evidence that e-training and e-performance appraisal work well in the private sector, particularly where organizations are going through high growth. The present study established that e-HRM practices enhance organizational effectiveness within the higher education sector. Research conducted within university environments shows that e-HRM has a positive impact on staff performance. It reveals that trust plays the mediator role and emphasizes the importance of establishing a trusting relationship so as to obtain the optimal effect of e-HRM practices. IT competency complementarity has a positive impact on the implementation of e-HRM.

Appropriate online training delivery methods, especially when customized and interactive, are crucial in promoting response and organizational cultures that improve employee health. The effectiveness of strengths-based training has been claimed in managerial coaching: levels of managerial behaviors, interpersonal communications, and emotional care. Meeting these challenges, like digital anxiety, with properly designed training and management support is highly beneficial in creating a healthier environment within a workplace. New solutions, including hybrid work and leadership e-learning, are crucial for increasing turnover rates and optimizing organizational performance during the crisis. Online training programs for improving knowledge related to trauma-informed care help to fill the gap and teach self-care skills, which are paramount in reducing staff burnout and increasing their confidence. The interdependence between the success of online training and their ability to integrate into the learning environment as well as the ability to include user feedback to improve skills and results in various fields of work. As the environment of online training continues to change, there will be an increased need for assessment of the programs being offered.

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Conflicts of Interest

The authors declare that they have no conflicts of interest to report regarding the present study.

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