REVOLUTIONIZING THE HOSPITALITY INDUSTRY: EXPLORING THE IMPACT OF VIRTUAL REALITY AND DIGITAL HUMAN RESOURCES ON EMPLOYEE ENGAGEMENT AND GUEST EXPERIENCES

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Abstract. This article examines the digitalization of Human Resource Management (HRM) and its impact on organizations and their workforce. As digital technologies continue to advance, HRM practices have evolved to leverage these tools for improved efficiency, decision-making, and employee engagement. The research focuses in particular on the uses of digital transformation in training employees remotely by enhancing virtual reality and the results of that. The article providing insights into the adoption of digital transformation in human resources management. This paper also explores the digital transformation of Human Resource Management (HRM) in the hotel industry. The hospitality sector has witnessed significant changes in recent years, with technology playing a pivotal role in reshaping HRM practices. This article synthesizes current research on digital HRM in the hotel industry, covering key themes, historical background, benefits, challenges, and future trends. It focuses on the fact that the latest technological progress in the hotel industry is the virtual reality experience, whether from hotel services and guest experiences or training employees in particular remotely by creating a virtual reality and the impact of this on the hotel management and the employee. It also finds underscore the necessity for hotels to adopt digital HRM strategies to remain competitive and enhance employee experiences.

Keywords: digitalization; HRM; hotel industry; digital HR; virtual reality.

JEL codes: M12; J24; M15; L83.

Introduction

The digitalization of Human Resource Management (HRM) is an evolving process that leverages digital technologies and data-driven strategies to transform traditional HR practices. Many years ago, when human resources management began to develop and with the beginning of the emergence of technology, it was expected that it would be the main key to advancing and facilitating operations in the tourism sector (Poon 1993, Buhalis 1998). This paper explores the intersection of HRM and digitalization, shedding light on the multifaceted dimensions of this transformation.

The hotel sector is considered one of the sectors that faces many challenges, the most prominent of which is the high rate of employee turnover (Bureau of Labor Statistics. 2019; KPMG. 2019; Vellenga. 2016; Bureau of Labor Statistics. 2019). a lot of effort and money are put into finding new candidates and managing the "churn in the system" brought on by having to replace staff members. Digitalization has a great effect on the recruitment process and the training-development of the workforce (Eshan and Binoy, 2018). Artificial intelligence and electronic digital human resources management have a significant role in attracting ideal candidates for the job (Kristof-Brown, 2000).

The hotel industry is characterized by a dynamic and service-oriented work environment. In recent years, the integration of digital technologies into HRM practices has gained prominence as hotels seek to streamline processes, improve employee satisfaction, and enhance overall operational efficiency. In the dynamic realm of the hospitality industry, where guest satisfaction and service excellence are paramount, the effective training of hotel staff plays a pivotal role in ensuring seamless operations and a superior guest experience. As technological landscapes continue to evolve, Virtual Reality (VR) emerges as a transformative tool with the potential to revolutionize the training methodologies employed within hotels. This paper delves into the application of VR as a medium for training hotel staff, aiming to unravel the intricacies of its impact on skill acquisition, employee performance, and overall service quality.

VR training offers a departure from conventional learning methods by immersing hotel staff in lifelike, interactive simulations that replicate real-world scenarios. From front-desk interactions and housekeeping procedures to emergency response training, VR provides an unprecedented opportunity for staff members to engage in hands-on learning within a controlled virtual environment. This study seeks to scientifically investigate the efficacy of VR in cultivating the skills and competencies required for various roles within hotel setting.

1. Digitalization in Human Resource Management (HRM). Scientific Historical Background

Human Resource Management (HRM), a fundamental cornerstone of contemporary organizational structures, has evolved over the years through a complex interplay of societal, economic, and technological forces. This scientific exploration delves into the historical trajectory of HRM, examining the key milestones, paradigm shifts, and theoretical foundations that have shaped the discipline into what it is today.

The origins of HRM can be traced back to the early 20th century, marked by the Industrial Revolution and the subsequent rise of large-scale industrial enterprises. During this era, the focus on personnel management primarily revolved around transactional activities such as payroll administration and workforce supervision. However, as organizations expanded and diversified, the need for a more strategic and comprehensive approach to managing human capital became evident

The mid-20th century witnessed a paradigm shift with the advent of behavioral sciences and the emergence of theories such as Maslow's Hierarchy of Needs and McGregor's Theory X and Theory Y. These psychological perspectives reshaped the understanding of human motivation and organizational behavior, prompting a transition from mere personnel administration to a more people-centric and strategic approach known as Human Resource Management.

The latter half of the 20th century marked further transformations with the globalization of business, advancements in technology, and the increasing recognition of employees as valuable assets. Concepts like Total Quality Management, organizational culture, and strategic planning became integral to HRM practices, emphasizing the alignment of human capital with organizational goals.

As we navigate the 21st century, HRM continues to evolve in response to digital transformations, diversity and inclusion imperatives, and the rise of the gig economy. The scientific exploration of HRM's historical background serves as a critical foundation for understanding its current complexities and anticipating its future trajectory. This historical overview of HRM digitalization provides a scientific perspective on how this field has developed (Fig. 1).

The digitalization of Human Resource Management (HRM) has evolved over several decades, driven by technological advancements and changing organizational needs. This historical overview of HRM digitalization provides a scientific perspective on how this field has developed.

Early Digitalization Efforts (1960s-1980s):

− The earliest HRM digitalization efforts can be traced back to the 1960s with the advent of mainframe computers.

Fig. 1: Historical background of Digital Human resources[1]

− Organizations began using computers for basic HR tasks, such as payroll processing and employee record-keeping.

− These early systems focused on automating routine administrative tasks, reducing manual paperwork, and improving data accuracy.

Emergence of HR Information Systems (HRIS) (1980s-1990s):

− The 1980s saw the emergence of HR Information Systems (HRIS), which allowed HR departments to store and manage employee data electronically.

− HRIS introduced functionalities like employee self-service portals and automated benefits administration.

− These systems improved HR efficiency and accuracy while laying the groundwork for more advanced digitalization.

Integration of Internet Technologies (Late 1990s-Early 2000s):

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[1] Made by the author

−The late 1990s and early 2000s marked a significant shift with the integration of internet technologies.

−Web-based HRIS platforms enabled greater accessibility and remote access to HR information.

−The concept of e-recruitment emerged, allowing organizations to post job openings online and accept electronic applications.

Evolution of Cloud-Based HRM (2010s):

−The 2010s saw the rise of cloud-based HRM systems, providing scalable and cost-effective solutions.

−Mobile applications and remote work tools became integral to HRM, enabling employees to access HR services on the go.

−Data analytics and reporting capabilities in HRM software started to gain prominence, aiding in decision-making and workforce planning.

Artificial Intelligence and Automation (2010s-Present):

−Artificial Intelligence (AI) and automation have become central to HRM digitalization in recent years.

−AI-driven tools are used for candidate screening, chatbots for employee queries, and predictive analytics for talent management.

−The integration of AI and automation has led to increased efficiency and data-driven decision-making.

The Role of Big Data (2010s-Present):

−Big Data analytics have become a valuable asset in HRM, providing insights into employee behavior, performance, and engagement.

−HR departments utilize data to design talent acquisition strategies, employee training programs, and retention initiatives.

−This trend reflects the increasing importance of data-driven HR practices.

Employee Experience and Well-being (2010s-Present):

−In recent years, there has been a growing focus on enhancing the employee experience through digitalization.

−Well-being apps and platforms address employee mental and physical health, while employee engagement tools boost morale.

−These digital solutions cater to a holistic approach to HRM that goes beyond traditional administrative tasks.

Ethical and Legal Concerns (Ongoing):

−As HRM digitalization advances, ethical concerns about data privacy, bias in AI, and employee consent have come to the forefront.

−Researchers and policymakers are addressing these issues to ensure the responsible and fair use of digital HR technologies.

2. Adoption of HRM Digitalization in hotels

The adoption of various digital tools and platforms in HRM, such as applicant tracking systems, HR analytics software, and employee self-service portals, has enabled organizations to streamline processes and enhance communication.

Cloud-Based HR Systems: The shift to cloud-based HR systems has allowed organizations to centralize and secure HR data, making it more accessible and adaptable to changing business needs.

Efficiency and Cost Reduction: Automated HR processes reduce administrative burdens, allowing HR professionals to focus on strategic tasks. This leads to cost savings and improved resource allocation (Shamim et al., 2017)

Enhanced Decision-Making: HR analytics and data-driven insights enable organizations to make informed decisions about workforce planning, talent management, and employee engagement.

Employee Experience: Digitalization has improved the employee experience through self-service portals, mobile applications, and personalized training and development opportunities.

Artificial Intelligence (AI) is playing an increasingly significant role in Human Resource Management (HRM), revolutionizing how organizations manage their workforce. AI in HRM encompasses a wide range of applications that leverage machine learning, natural language processing, and data analytics to streamline HR processes, improve decision-making, and enhance employee experiences. Here are some key aspects of AI in HRM:

Recruitment and Talent Acquisition: AI-powered tools are used for resume screening, where they can quickly analyze resumes to identify the most suitable candidates based on keywords, skills, and experience.

Chatbots and virtual assistants can engage with job applicants, answer their questions, and schedule interviews, offering a seamless candidate experience.

Predictive analytics helps in identifying the best channels for sourcing talent, optimizing recruitment budgets.

Candidate Matching and Assessment:

AI algorithms can match candidates with job descriptions, ensuring a better fit for both the candidate and the organization.

Assessment tools use AI to evaluate candidates through video interviews, online tests, and personality assessments.

Onboarding and Employee Engagement:

Chatbots and AI-driven onboarding processes guide new hires through the necessary paperwork, policies, and culture, enhancing the onboarding experience.

AI-driven surveys and sentiment analysis can help HR professionals gauge employee satisfaction and engagement levels in real-time.

Learning and Development:

AI-powered learning management systems can personalize training content based on individual learning preferences and needs.

Chatbots and virtual mentors provide employees with on-demand learning support and guidance.

Performance Management:

AI can facilitate continuous feedback and performance assessments, helping managers make data-driven decisions about promotions and compensation.

Predictive analytics can identify high-potential employees and those at risk of leaving the organization.

Employee Wellbeing and Benefits:

AI-driven wellness programs can provide employees with personalized fitness and nutrition recommendations.

Chatbots can answer questions about benefits packages, providing employees with quick and accurate information.

Workforce Planning and Analytics:

AI can analyze historical and real-time data to assist HR professionals in workforce planning, helping them make more informed decisions regarding staffing and resource allocation.

Predictive analytics can forecast future workforce needs and trends.

Compliance and Data Security:

AI can assist in identifying compliance issues, helping organizations stay in line with labor laws and regulations.

AI is used in data security and access control, safeguarding sensitive employee data.

Diversity and Inclusion: AI can help reduce bias in hiring and performance evaluations by identifying and mitigating potential sources of bias.

AI-driven analytics can monitor diversity and inclusion efforts and suggest improvements.

Employee Feedback and Surveys: AI-powered sentiment analysis tools can process and interpret large volumes of employee feedback to identify trends and areas for improvement.

AI in HRM has the potential to make HR processes more efficient, data-driven, and employee-centric. However, organizations need to be mindful of ethical considerations, data privacy, and potential bias in AI algorithms. Additionally, successful AI implementation requires HR professionals to adapt to new technologies and collaborate effectively with IT departments to ensure smooth integration.

3. Future Trends in HRM Digitalization

Artificial Intelligence and Machine Learning: AI-driven chatbots, predictive analytics, and machine learning will become increasingly important in HRM, offering improved insights and personalization.

Mobile Accessibility: As mobile usage continues to rise, HRM systems will need to be optimized for mobile platforms to accommodate remote and frontline workers.

Blockchain Technology: Blockchain may provide secure, tamper-proof HR records and enable more transparent and verifiable credential verification.

2.1. Virtual Reality environment

Virtual Reality (VR) can significantly enhance guest experiences in various ways within the hotel industry. By leveraging VR technology, hotels can create immersive and memorable experiences that set them apart from competitors. VR creates realistic, three-dimensional simulations of hotel environments, including lobbies, guest rooms, and dining areas.

Guests can take virtual tours of the hotel's facilities and rooms before making a reservation, giving them a realistic preview of what to expect. This helps manage expectations and reduces the likelihood of dissatisfaction upon arrival.

Virtual Tours for Recruitment and Guest Experience: Hotels can use VR to provide virtual tours for prospective employees and guests. This offers a unique way to showcase the hotel's facilities, culture, and amenities.

Room Selection and Personalization: VR can enable guests to explore different room types, layouts, and views to help them make more informed choices. They can also personalize their room by selecting preferences for decor, amenities, or special arrangements.

Destination Exploration: Hotels can offer VR experiences that allow guests to virtually explore the surrounding area, nearby attractions, and activities. This helps guests plan their itineraries and creates excitement about their stay.

Virtual Concierge Services: VR can provide guests with virtual concierge services, allowing them to book reservations, request room service, or get information about hotel amenities through an interactive virtual assistant.

Dining Experiences: VR can simulate dining experiences in the hotel's restaurants, allowing guests to view menus, explore the ambiance, and even interact with virtual chefs to customize their meals.

Spa and Wellness Previews: Guests can use VR to experience spa and wellness services before booking appointments, ensuring that the treatments and environments meet their preferences.

Entertainment and Activities: Hotels can offer virtual experiences such as virtual reality gaming, virtual movie theaters, and virtual tours of local attractions to keep guests entertained, especially during inclement weather or downtime.

Cultural and Educational Insights: VR can provide guests with immersive experiences that offer insights into the local culture, history, and traditions, enhancing their understanding and appreciation of the destination.

Enhanced Events and Meetings: For guests attending conferences or meetings, VR can be used to provide immersive presentations, interactive breakout sessions, and virtual networking opportunities.

Feedback and Surveys: After their stay, guests can use VR to provide feedback and complete surveys, ensuring their opinions are heard and acted upon for continuous improvement.

Accessibility and Inclusivity: VR can be used to create accessible and inclusive experiences for guests with disabilities, allowing them to virtually explore and enjoy hotel amenities that may otherwise be challenging to access.

Guest Engagement and Loyalty: Offering unique and engaging VR experiences can foster loyalty among guests, encouraging them to return to the hotel for future stays.

While VR can significantly enhance guest experiences, it's essential to ensure that the technology is user-friendly, well-maintained, and aligned with the overall guest service strategy. Hotels must also offer traditional services alongside VR to cater to guests with different preferences. Additionally, regular updates and innovative VR content are crucial to maintaining the wow factor and keeping guests engaged.

2.2. Training by Virtual Reality (VR) in hotel industry

Virtual Reality (VR) technology is increasingly finding applications in Human Resources Management (HRM) within the hotel industry, providing innovative ways to train, develop, and engage employees, as staff can navigate and interact with virtual spaces, gaining a hands-on experience without the need for physical presence.

Here are some key aspects of how VR is transforming HRM in the hotel industry:

Recruitment and Assessment: During the hiring process, VR can be used to assess a candidate's skills in a hotel-specific environment. It can help in identifying the right talent for various roles in the industry.

While VR offers numerous advantages for HRM in the hotel industry, it's essential to consider factors like cost, technology implementation, and content creation. Furthermore, ensuring that VR training programs align with the hotel's unique needs and objectives is crucial for their success. The ongoing development and adoption of VR technology in HRM can significantly enhance employee skills, satisfaction, and the overall guest experience in the hotel industry.

Virtual Onboarding and Training: VR can be used to create immersive onboarding experiences for new hotel employees. This allows them to explore the hotel's facilities, familiarize themselves with the layout, and understand various procedures and policies in a realistic virtual environment. One of the main benefits of virtual environment simulations is that the situation can be repeated at any time, and can be entered from virtually anywhere.

Simulated Training Scenarios: VR can simulate real-world scenarios specific to the hotel industry, such as front desk operations, housekeeping, or food service. Employees can practice these scenarios in a risk-free environment, allowing for better skill development and increased confidence.

VR simulations can train employees on emergency procedures and safety protocols. This is especially crucial for roles that require quick and precise responses, such as security personnel and first responders.

Accessibility and Remote Training:

VR training can be accessible to remote employees, making it easier to train staff who may not be physically present at the hotel location.

Employee Engagement and Team Building:

VR can be used for team-building exercises and collaborative activities, helping foster a sense of community and shared purpose among hotel staff.

Language and Cultural Training: In the hotel industry, employees often need to interact with international guests. VR language and cultural training can help staff become proficient in languages and understand cultural norms, improving guest interactions.

Customer Service and Guest Engagement:

VR can be used to create interactive scenarios where employees practice handling guest complaints or difficult situations. It can also teach employees how to provide exceptional service and create memorable experiences for guests.

Assessment and Feedback: VR can provide immediate feedback on an employee's performance within a virtual training environment. This data can be used for more accurate performance assessments and tailored development plans.

Identify Training Needs: Assess the current skill levels of the specific department staff.

Identify areas that need improvement or new skills that are relevant to the hotel's operations.

Choose a Learning Management System (LMS): A Learning Management System (LMS) is a software application designed to facilitate the administration, documentation, tracking, reporting, and delivery of educational courses or training programs. LMS features can vary among different platforms, but here are some common features you might find in a typical LMS:

User Management:

User Profiles: Create and manage user profiles for each learner, including personal information and progress tracking.

Roles and Permissions: Assign different roles and permissions to users based on their responsibilities and access needs.

Course Management:

Course Creation: Develop and organize courses with various content types such as text, images, videos, and quizzes.

Content Upload: Upload and manage learning materials, presentations, documents, and multimedia files.

Version Control: Maintain version control for courses and update content as needed**.**

Assessment and Quizzing:

Quiz Creation: Create quizzes and assessments to evaluate learner understanding.

Grading and Feedback: Automatically grade assessments and provide feedback to learners.

Badges and Certificates: Implement gamification elements such as badges and certificates to reward achievements and motivate learners.

Customization and Branding:

Branding: Customize the look and feel of the LMS to align with the organization's branding.

White Labeling: Some LMS platforms offer white-label solutions for complete branding customization.

Security and Compliance:

User Authentication: Implement secure user authentication methods to protect user data.

Data Encryption: Ensure that data transmitted and stored within the LMS is encrypted.

Compliance Features: Support compliance with industry standards and regulations.

User Support:

Help Desk or Support Center: Provide resources or a help desk for users to get assistance with technical issues or inquiries.

Content Repository:

Storage and Organization: Store and organize learning materials in a central content repository.

Feedback and Surveys:

Feedback Forms: Collect feedback from learners to improve courses and the overall learning experience.

Surveys: Conduct surveys to gather insights into the effectiveness of training programs.

When selecting an LMS for your organization, it's essential to consider your specific needs, the size of your user base, and the types of content you plan to deliver. Different LMS platforms offer varying features, and choosing the right one can significantly impact the success of your training programs.

Invest in a user-friendly LMS to deliver and manage training content.

Look for features such as tracking progress, assessments, and the ability to upload various types of content.

Create Engaging Content:

Develop interactive and engaging training modules.

Use multimedia elements such as videos, simulations, and quizzes to make the content more interesting.

Mobile-Friendly Platform:

Ensure that the training platform is accessible on various devices, including smartphones and tablets.

This allows staff to learn at their own pace and in a flexible manner.

Artificial Intelligence (AI) is transforming employee training by making it more personalized, efficient, and effective. Here's how AI is revolutionizing employee training:

Personalized Learning Pathways:

AI analyzes individual employee learning styles, preferences, and performance to create personalized training pathways. This means that each employee's training experience can be tailored to their specific needs and learning pace.

Content Recommendation:

AI algorithms suggest relevant training content to employees based on their job roles, skill gaps, and career goals. This ensures that employees receive the most pertinent and engaging training materials.

Adaptive Learning:

AI-driven adaptive learning systems continuously assess an employee's understanding and adjust the training content accordingly. If an employee is struggling with a concept, the system can provide additional resources or different teaching methods to improve comprehension.

Microlearning:

AI enables the creation of microlearning modules, which are short, focused lessons that employees can access on-demand. These modules are particularly effective for just-in-time learning and for quickly refreshing knowledge.

Virtual Reality (VR) and Augmented Reality (AR):

AI-driven VR and AR simulations offer immersive training experiences. For example, employees can practice complex tasks in a virtual environment, such as medical procedures, equipment maintenance, or safety drills.

Natural Language Processing (NLP):

NLP technology allows employees to interact with AI-powered chatbots or virtual assistants for training support. Employees can ask questions, seek clarifications, and receive immediate feedback.

Data-Driven Insights:

AI analyzes training data to provide insights into what training methods are most effective, which employees might need additional support, and where training content may need improvement.

Multilingual Training:

AI-powered translation tools enable employees to access training content in their preferred language, making training materials more accessible to a diverse workforce.

Compliance Training:

AI can help ensure that employees complete mandatory compliance training by sending reminders, tracking progress, and generating compliance reports for audit purposes.

Remote and Just-in-Time Learning:

With AI, employees can access training materials and support remotely, making learning more flexible and accessible, which is especially valuable for remote or globally distributed teams.

Continuous Learning:

AI facilitates continuous learning by recommending ongoing training and development opportunities that help employees stay up-to-date with the latest industry trends and technologies.

AI in employee training not only makes learning more engaging and effective but also helps organizations retain and upskill their workforce, resulting in a more knowledgeable and adaptable team. It allows organizations to make data-driven decisions about training programs and provides employees with the tools they need to succeed in their roles.

Conclusion

The digitization of HR management provides organizations with a wealth of opportunities to improve their HR practices, enhance employee engagement, and make data-driven decisions. However, challenges related to data privacy, resistance to change, and skills gaps must be addressed. The

evolving landscape of HRM digitization promises to be shaped by artificial intelligence, blockchain, and immersive technologies, heralding new possibilities in this field.

This paper emphasizes the importance of adopting digitalization in human resources management, taking into account the benefits and challenges associated with it, and making the most of integrating digitalization and using it in employee training through virtual reality, which provides the greatest benefit to the hotel industry. Keeping in mind the constant readiness for the continuous developments emerging in this dynamic field. More research is needed to explore the long-term impacts and practices of HRM digitization as it continues to evolve in the ever-changing HRM landscape.

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