

Impact of Virtual Reality (VR) and Artificial Intelligence (AI) on HRM Functions

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Abstract: As the increase in the technological development, Virtual Reality know-how has been used extremely in various fields. Like in ERP, even HR department has insisted the digital wave towards it by major enterprises and institutions. Previous few decades the AI technologies has been generated sweeping transformation across various industries. The culture and trends in the organisations have been witnessed a pragmatic change over years. The research paper concentrates on the changing role in the emerging wave of VR and AI in major HRM functions like recruitment, hiring, onboarding, and learning and development. The usage of HR technologies is helping the emerging HR professionals to take advantage for them as well as for the organisation and employees. The method used in research is quantitative survey, the data obtained for the research is by distributing online questionnaire to major IT HR professionals in Chennai by simple random sampling technique. The results have shown that there is great impact of VR and AI technologies in IT sector for recruiting and other HRM functions. This shows that the HR management functions can be improved effectively so that the costs of various HR related activities can be reduced, improves the engagement of employees and enriches the effectiveness of organisation.

Keywords: IT, Recruitment, Hiring, Learning, development

1. Introduction:

We are in the emerging phase of new industrialisation that focus on the human working along with the advanced technology, likewise we have taken here VR and AI, which can serve better current needs of HR professionals in a better manner. With the introduction of these the HRM functions are smoothened in many ways. Here we are understating the various HRM functions carried out by the technologies. The major aim of HRM is how we deal with the people and provide business in all finest way with the available human capital. Technology is the lifeblood of the



HR professionals. There are many technologies which have made the HR professionals to integrate with the Smart HR tools such as IoT, AI, big data, data analytics etc. This paper concentrates on the how effectively the technologies have been used in the HRM functions of major IT companies in Chennai, like introducing applicant tracking system, social media recruitment, robotic process automation and information systems. HR professionals in the IT sector face excess pressure in the talent acquisition. They find it difficult for the competent candidates in the IT sector for a long run. Due to the advancement in the technology now it has paved a way to solve the problem in the HR department. AI and VR can be seen in the HR Management functions like recruitment and selection- training and development, compensation development, onboarding and talent acquisition. The study has been made in major top four IT sector where the AI and VR technologies have been implemented.

AI and VR technologies are tremendous benefits to the IT sector like simplifying and streamlining of the recruitment process, saves time and increases efficiency, no discrimination in anyways related to caste, creed, race, ethnic background and many more,

as well as enhances the privacy of the candidate. It also helps in vetting candidates, onboarding, tremendous promise for the simulating training related to soft skills, technical training, they also believe that the VR and AI technologies could help bring back the sense of camaraderie in the organisation.

2. Literature review:

In the recent time, there has been a huge growth in Virtual Reality and Artificial Intelligence business, and the number of Virtual Reality users is increasing around the world. The role of these are changing as well from gaming technologies and application used mainly for entertainment, to the modern and effective application in the business environment- from the management- training and recruiting processes to the use of Virtual Reality and Artificial Intelligence for marketing and branding, from the use of main operational business processes such as 3 Dimension visualization, measurement as well as modelling to others.

Vardarlier (2021) HR is the most important role in an organisation because it is in charge of managing the organization's people resources. According to the characteristics of innovation, HR professionals are updating themselves with new technology realities. These primary technologies can be used to apply the code of ethics, disciplinary actions, and complaint rules.

Muhamad Yusuf (2023) HRM means to the individuals who are in an organisation that has policies and practises in place to manage and assist these employees, and digital HRM has a beneficial impact on their performance. Advanced technology is used to offer favourable conditions for human activity, to generate excellent products, and to aid in the development process in accordance with the necessities of human life that can use technology appropriately and correctly. HR is very important role in any organisation as they manage the most important resources of an organisation, its workforce and ensure that they are able to attract, retain and nurture the best talent available.

Abudaqa et al. (2022) Many things have changed in the corporate world in the modern day. The HR Division must face a significant challenge in adjusting their HR management strategy to technological advances. When it comes to using technology in the HR industry, we must be aware of the numerous hurdles that must be addressed and conquered. It is the procedure of attracting highly skilled employees. Employee recruiting is a critical task that would fall under the purview of the HR department.

Wei & Zhou, 2022; Sari et al., (2023), they say that Fairness is another ethical dilemma with AI-based recruitment strategy. AI set of rules can be constructed with intrinsic biases that perpetuate discrimination or injustice against specific categories of candidates.

Guichet et al. (2022), Most of the organisations polled informed that, they were looking into VR exams to improve their hiring process. One of the most important advantages of virtual reality examinations is its capacity to cut the time and costs involved with traditional in-person assessments. For example, VR valuation can eliminate the need for costly equipment, travel expenses, and on-site testing facilities.

3. VR and AI in HRM functions:

HR Tech, often known as Human Resource Technology, is the use of technology to improve key Human Resources activities like as recruiting, talent acquisition and management and retention, compliance, payroll, performance appraisal and management, employee engagement, and others. Emerging technologies such as AI, ML, and Robotic Process Automation are being used to strengthen the HR industry's research, business intelligence, people analytics, and automation. As a result, the way basic HR operations are done out is changing. Furthermore, it is

changing the goals of the HR department. HR is moving away from simply putting systems in place and towards a broader goal: navigating value from talent.

Meanwhile the HR is expanding its function connecting to the productivity and employee engagement through these technologies. Here in this article major functions of HRM have been taken into consideration understand the impact of technological developments.

Talent Acquisition and Smart Recruitment

The Human Resources Department values talent sourcing and retention since it can aid in the development of business talent. Artificial intelligence is progressively being employed in talent recruiting. 'Machine learning technology' minimises the time and expenditure connected with interviewing prospective candidate and answering questions, removing the need for repetitive operations. Aside from the shortened selecting process, HR staff may now focus on more vital activities such as recruiting and employee management.

'Artificial intelligence' (AI) is supporting HR teams in finding and hiring top talent. There are numerous applications for AI in recruitment. We own HR software powered by AI that will help to match job candidates with their skills and cultural fit based on video interview. Then there's software that screens candidates using Artificial Intelligence-based gamified assessment. AI-powered chatbots RPA is also commonly utilised to streamline the screening process, whether it's arranging interviews or answering frequently asked questions. There is also software that attempts to improve the candidate experience throughout the recruitment process.

Direct Integration

Showing sites throughout the world, sharing the firm's concept of work, and introducing current employees to future employees are all advantages that might encourage recruits to join the organisation.

Virtual reality also makes it easier to integrate and onboard new personnel.

They can research the organisation before arriving and track the various phases (badge, HR offices, cafeteria, etc.) from their first day on the work.

As a result, the new employee possesses all of the keys required for their first day at a new company.

Training

The primary application of AR/VR technologies in human resources is unquestionably training. Boeing, for example, employs virtual reality to educate 787 pilots. BMW, too, has created augmented reality training for its service engineers. There are plenty such examples, and we may expect research to show the good impacts of virtual reality training in the near future. These tactics are frequently used by medical students and construction workers to foresee potential difficulties upstream. A virtual reality experiment at Randstad makes temporary workers aware of safety in their future workstations.

Leadership

AI helps organizations improve their project leadership, training protocols, and trainee development. By examining the characteristics of a leader's team, the AI will evaluate the leader's qualities and provide pertinent recommendations for enhancing team performance. AI can be used to mine a company's human resource data system to identify high-risk personnel and to target retention efforts. AI will also help in determining areas where the company's business plan is lacking in knowledge and expertise. Artificial intelligence is going to shift our understanding of what constitutes effective leadership. A more collaborative approach to leadership is needed to promote improved teamwork between managers and staff.

Employees Engagement

As businesses become more globalised, with subsidiaries situated all over the world, VR has the potential to bring people together and facilitate cooperation.

Enabling a multinational team or a team of remote workers to cooperate effectively is a major challenge that HR managers encounter on a daily basis.

The opportunities provided by VR and AR extend beyond video conversation.

While current communication methods can often donate to a sense of isolation or dehumanisation for certain collaborators, virtual or augmented reality allows us to design a collaboration model in which sensory factors take centre stage.

In short, virtual reality used to workplace collaboration has the potential to put humans back into the workforce.

Companies should expect a rise the productivity, greater creativity and innovation, and, most importantly, a sense of bond and strengthened commitment inside the structures by reactivating a sometimes-degraded link between the teams.

One of the greatest effective applications of AI in HR is ‘data analysis’. The more information you have on your staff, the better your organisation will perform. Smarter technology can increase employee performance by providing efficient solutions that allow organisations to minimise time-to-market and mitigate hazards. HR professionals will be able to design, implement, and adapt processes quicker than ever before thanks to better technologies such as artificial intelligence.

4. Methodology

The primary data was gathered- through a questionnaire from HR professional of a selected IT sector on adoption of VR and AI technologies. The Secondary-data was gathered through annual reports of the organisation, studies on digital technologies, the organization's website, and so on.

Sampling: The study focused on those working in the IT sector in Chennai. For the purposes of the study, a sample of respondents was contacted. Face-to-face interviews were done by the researcher. It aided in lowering non-response error as well as the time and cost of research.

We collected input from employees using a random sample method. The relevant statistical-procedures were applied for data tabulation and analysis.

5. Results, Analysis, and Interpretation

Table 1: Reliability Test:

Reliability Statistics(RS)	
Cronbach's Alpha;	No. of Items.
0.719.	3

Source: Author's Calculation using SPSS

The Cronbach's Alpha test is used to regulate the statements' reliability and assess the instrument's internal consistency. The statements of Q1, Q2, and Q3 have Cronbach's Alpha of 0.719, which is more than the expected value of 0.70. It is demonstrated that there is a high level of internal consistency and that the questionnaire may be regarded as extremely dependable because all of the variable values are better than the standard value.

*VR technology has significantly enhanced HRM functions by enabling more effective recruitment, training, and employee engagement in the AI era.

Table 2: Frequency Distribution

Likert Scale	Response Frequency	Percent
Strongly agree:	220	77%
Agree,	34	12%
Neutral,	16	6%
Disagree,	14	5%
Strongly Disagree,	0	0
Grand Total	284	100 Per

Source: Author's Calculation using SPSS

Table 3: Descriptive Statistics

Statistic	Value
Mean	1.38
Std. Deviation	0.795

Source: Author's Calculation using SPSS

Frequency Distribution: The table shows that 77.5% of respondents strongly-agree that VR technology enhances HRM functions, while 12% agree, 5.6% are neutral, and 4.9% disagree.

Descriptive Statistics: The mean response is 1.38, indicating that the overall sentiment leans towards strong agreement. The standard deviation of 0.795 suggests there is some variation in responses, but not a great deal.

*Impact of VR technology on HRM functions in the AI era, specifically within the IT industry in Chennai.

Table 4: Frequency Distribution

Satisfaction Level	Frequency:	Percent:	Valid %	Cumulative %
Very Satisfied,	136	47.9	47.9	47.9
Satisfied,	102	35.9	35.9	83.8
Neutral,	34	12.0	12.0	95.8
Dissatisfied,	12	4.2	4.2	100.0
Very Dissatisfied,	0	0.0	0.0	100.0
Total	284	100.0	100.0	

Source: Author's Calculation using SPSS

Table 5: Descriptive Statistics.

Statistic:	Value
Mean:	1.73
Std. Deviation:	0.812

Source: Author's Calculation using SPSS

Frequency Distribution: The table shows that 47.9% of respondents are very-satisfied with the impact of VR technology on HRM functions, 35.9% are satisfied, 12.0% are neutral, and 4.2% are dissatisfied. No respondents are very dissatisfied.

Descriptive Statistics: The mean response is 1.73, indicating that the overall sentiment leans towards satisfaction. The standard deviation(SD) of 0.812 suggests there is some variation in responses, but the majority of respondents are in the satisfied or very satisfied categories.

*The application of VR know-how in HR Management functions within the IT industry in Chennai during the AI era has incurred acceptable costs for the organization.

Table 6: Frequency Distribution

Cost Acceptability.	Frequency.	Percent.	Valid Percent.	Cumulative Percent.
Strongly agree:	210	74	74	74
Agree:	44	15	15	89
Neutral:	30	11	11	100

Disagree	0	0	0	100
Strongly Disagree	0	0	0	100
Total	284	100	100	

Source: Author's Calculation using SPSS

Table 7: Descriptive Statistics

Statistic	Value
Mean	1.37
Std. Deviation	0.632

Source: Author's Calculation using SPSS

Frequency Distribution: The table shows that 74.0% of respondents strongly agree that the implementation of VR technology has incurred acceptable costs, 15.0% agree, and 11.0% are neutral. No respondents disagree or strongly disagree.

Descriptive Statistics: The mean response is 1.37, indicating that the overall sentiment leans towards strong agreement. The standard deviation of 0.632 suggests that there is some variation in responses, but the majority of respondents are in the strongly agree or agree categories which HRM function within the IT industry is best suited for AI integration to enhance efficiency and effectiveness?

Table 8: Descriptive Statistics

Statistic	Value
Mean	76.8
Std. Deviation	67.35

Source: Author's Calculation using SPSS

Table 9: Results

Rank	HRM Functions	Respondents	Percentage
1	Recruitment and Talent Acquisition	172	60.56
2	Employee Training and Development	132	46.48
3	Employee Engagement and Satisfaction	34	11.97
4	Performance Management and Appraisals	28	9.86
5	Compensation and Benefits Administration	18	6.34
	Total	284	100

Source: Author's Calculation using SPSS

Data Listing: This shows the number of respondents who believe each HRM function is best suited for AI integration.

Descriptive Statistics: The mean number of respondents is 76.8, with a SD of 67.35, representing variability in the preferences for different HRM functions. The minimum number of respondents is 18, and the maximum is 172.

6. Conclusion:

VR and AI in the “Human Resource Management” are critical for organisations to execute HRM operations more smoothly. Systematic and reasonable HR may encourage the logical allocation of diverse sources, improve enterprises’ economic, cultural, social and competitive levels and also promote the achievements of enterprises overall strategic objectives. Enterprise HRM is not static. It must stay up with the times while also innovating against the backdrop of the times. One such know-how that has significant influence in the age of AI with enterprise HRM is VR technology. The HR management system based on VR technology is rational and effective, and it may increase employee wellness, learning and development efficacy and management expenses. HRM recruitment and onboarding have a significant-impact on V R and AI technology, thus we may boost employee engagement through proper staff recruitment and training.

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