

Adaptation to Transformation of Human Resource Practices and Technology: Web 3.0 Metaverse

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Abstract

Purpose

The current study investigates how technology has impacted human resource operations. To further assist the digital revolution in all facets of human resource management, the term "metaverse" has been developed.

Design/methodology/approach

Employees in India's Delhi NCR region who work in the IT sector provided the data for 196 respondents. The hypotheses were tested using SPSS.

Findings

The results of this study found a direct association between Technology and Human Resource Practices. Training & Development, Recruitment & selection and Recognition are affected by the adoption of technology.

Research limitations/implications

Future research may be focused on a varied population inside India, where the study was conducted, to generalise the outcome to various industrial and cultural situations. The current study, which is centred on IT workers, may be expanded to include other human resource strategies and other demographic factors.

Practical Implications

By experimentally examining the relationship between the two variables, the study advances the body of knowledge on technology and human resource practices. For employees to be encouraged to adopt the new working environment, employers must design a plan to help them by setting up frequent online training programme and flexible work schedules.

Keywords: Technology, Recognition, Recruitment, Selection, Training and Development.

Introduction

The phrase "metaverse," which combines "meta" with the word "universe," refers to a hypothetical synthetic environment connected to the real world. The 1992 release of Neal Stephenson's book *Snow Crash* introduced "metaverse" to readers. The huge simulated atmosphere that coexists with the real world and in which people converse via avatars is the metaverse, as defined by Stephenson in this book. The metaverse, which was first

conceptualized as a system-generated universe, has been labeled using a wide variety of terms, including omniverse, collective space in virtuality and life logging.

This study defines the metaverse as a virtual atmosphere that mixes real-world and digital components, made achievable by the fusion of Internet and Network technologies with Extended Reality (XR). XR includes digital and physical aspects to varied degrees, as shown by the Reality-

Virtuality Continuum created by Milgram and Kishino, including augmented reality (AR), and virtual reality (VR) (VR). Similar to this, Snow Crash's metaverse scene shows the contrast between the actual world and a computer recreation of the same circumstances. The avatars that belong to individual users in the metaverse are likened to their physical identities and provide them the ability to lead a different existence in a virtuality that serves as a metaphor for their real-world experiences. Technology has been expanding at a very high speed. It has changed the expressions of sharing right from the introduction of internet. Earlier messages could be sent via texts but the introduction of mobile phones gave rise to an audio-visual connection among humans. This paper aims to find out the impact of metaverse on Human Resource practices to involve the employees and cut down the inter-departmental barriers to bring all the employees to the same platform in the organization. Following are the objectives identified for the study :

- 1) To evaluate the impact of metaverse on Human Resources practices.
- 2) To trace the evolution of metaverse on HR practices.

Literature Review

Technology

Technology improvements have revolutionised how we work and how businesses run their personnel (Cascio & Et.al,2016).The word "technology" spread like wildfire. Although this phrase dates back to the 17th century, it wasn't widely used by the end of World War II. Invention,

machine, engineering, and industrial science are other terms for the phenomena and things we today associate with technology (Schatzberg, 2018). From the initial 1960s, "technology" is a common word, typically used in opposition to "innovation" and "transformation" (Schatzberg, 2018).

Personal computer in 1977 and the remarkable growth of internet services may be used to split the past 60 years into three stages (1997). These two occurrences, which took place at critical junctures in the "computer revolution" and "internet revolution," changed the face of the technological sector and lives of countless people (Gordon, 2012).Mainframe computers were largely disregarded by the public until 1976. (Campbell-Kelly & Et.al, 2015). In 1963, IBM started developing a novel type of computer (the 360 series), laying the foundation for the company's future success. In 1971, Intel released its first microchip after being established in 1968.

At this point, HR managers realised they had to employ technology to manage their workforce. Businesses were urged to improve their personnel data management practises after the Equal Employment Opportunity Commission (EEOC) was established in the United States in 1964 and subsequent EEO laws (Dobbin & Sutton, 1998).

Several organisations were inspired by this to think about deploying EDP technology to improve personnel data management. Managers of human resources also had to think about retraining employees at this time due to the threat of job displacement brought on by computerization. Complex management information systems (MISs) arose as computers became more accessible, which had an influence on the

growth of human resource information systems (Bhuiyan, Et.al 2014). At this time, a number of technologies, including computer-aided design (CAD), total quality management (TQM), just-in-time system (JIT), and flexible manufacturing system (FMS), utilised advanced manufacturing technologies (AMT) (Dean Jr, Et.al,1984). These projects acknowledged a lot of consideration as a means of addressing the U.S. manufacturing sector's declining size, however also presented challenges to HR leaders (Dean Jr & Snell, 1996).

The third decade (1997–2019) began with an unprecedented wave of large-scale investment in user Internet services (1998). (1998). Social networking websites made their debut in 1997, and the idea of an Internet portals was developed in 1998. (Campbell-Kelly ,et al 2015). The term "smartphone" was originally used to describe mobile computing devices in 1997. A decade later, in 2007, Apple introduced the first iPhone, and in 2008, Google unveiled Android OS, opening up new online connections for consumers.

These changes greatly improved the Internet's usefulness in the workplace. HR specialists now had to deal with the increasing acceptance of remote work. Several HR operations employed internet technologies .HRISs have transformed into latest types of data-driven operations under the umbrella of e-HR and analytics.

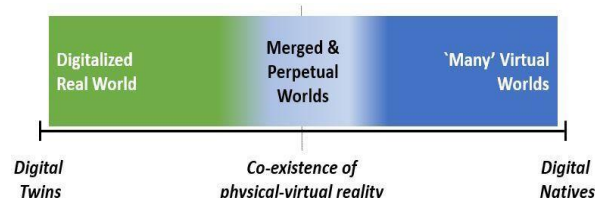


Fig 1

Fig. 1. Based on the idea of duality, the "digital twins-native continuum" In this

scenario, the metaverse is growing through three stages. The first step is to create digital twins, which are copies of our real environments that may periodically reflect changes in their virtual counterparts since they have been digitalized. The physical world is replicated digitally in "many" virtual worlds created by digital twins, and human users create new works there using their avatars as they would in the real world. It's important to keep in mind that these virtual worlds will initially have little interaction with one another and the real world, creating an data banks. Which will gradually connect inside a broad landscape after that (Lik-Hang Lee, 2021).

HR roles and responsibilities

Traditionally, the Human Resource (HR) department's responsibilities included creating employee handbooks, keeping attendance records, preparing employment contracts, administering employee benefits, and dealing with employee grievances. However, owing to advancements in technology (Page 2017), new rules, and a younger and more diverse workforce, HR's function is evolving. HR is critical to a company's success because it manages the people resources that drive innovation, develop strategies, drive revenue, and solve challenges. The job of Human Resource Development is growing increasingly important as HR becomes more strategic (HRD). Chalofsky (1992) defines HRD as "the study and practise of strengthening people', groups', collectives', and organisations' learning capacity via the creation and deployment of learning-based interventions to improve human and organisational growth and effectiveness."

HRD is essential in promoting organisational culture and employee engagement since it may have a significant

impact on management-level policy changes. In light of the rapid progress of technology, the HRD division typically spots any potential issues with staff development and training early. Profitable businesses usually encourage employees to acquire critical skills in order to remain competitive. Generally, HRD concentrates on career progression, financial aid, and succession planning. Performance management includes monitoring, training, counselling, performance management, and performance development (TVETipedia 2018).

Human resource development (HRD) professionals operate in a constantly changing, unpredictable environment. Practitioners use virtual reality (VR) technology to create and build new learning programmes and interventions, and they contribute to the development of new HRD practices on a regular basis (Ardichvili 2012). Researchers and academics examine these dynamic and complicated VR solutions on a regular basis in order to build new models and frameworks that practitioners may employ.

The goal of the paper is to evaluate the core ideas and contemporary breakthroughs in the use of metaverse in HRM. This article examines the role of metaverse in the development of immersive, near-real-life situations in virtual world. It emphasises the importance of technology in removing time and geographical limitations. Papers examines the changes in the selected HR practices due to advancement of technology

Metaverse - TRAINING & DEVELOPMENT

Information technology may also be used by human resources staff to instruct new hires more swiftly. As new hires may access company information and training

programmes from a distance, trainers are no longer required to work one-on-one with them during all phases of training. Virtual training enables HR leaders to quickly instruct a large number of teams and monitor their progress using automated evaluation tools, albeit some amount of human touch will undoubtedly always be necessary.

H1- Technology (Metaverse) has positive impact on Training and development .

Metaverse - RECRUITMENT & SELECTION

One area where technology has significantly impacted human resources is the recruiting industry. Before the Internet, HR recruiters were forced to trust on print media, such as newspapers, to publicize openings and identify applicants for available positions. Yet, HR recruiters lacked the ability to advertise a position in one or more localities and have it viewed by millions of candidates at once. Other strategies, including as networking, were also employed. For right recruiter, technology has increased the efficiency and success of recruiting.

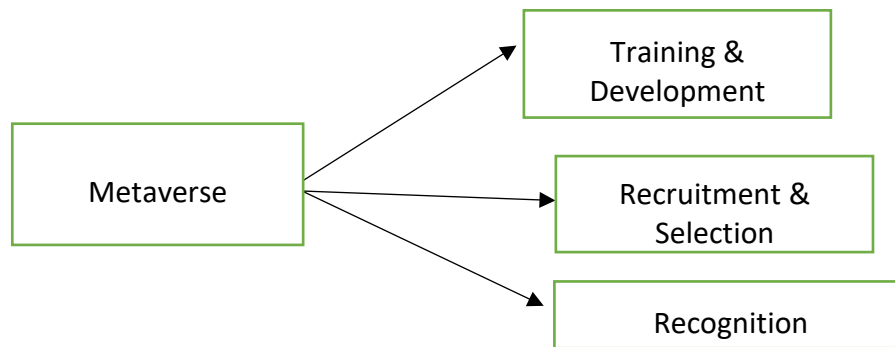
H2 – Technology (Metaverse) has a positive impact on Recruitment and Selection.

Metaverse - RECOGNITION

By utilising a cutting-edge digital platform to power your recognition programmes, businesses may better develop their relationship with staff members and have a bigger effect. Every accomplishment, no matter how minor or significant, may be publicly shared throughout the whole workplace thanks to a social recognition platform.

H3 – Technology (Metaverse) has a positive impact on Recognition.

Conceptual Model



Research Methodology

Sample and Data collection

Employees of IT companies were chosen for this investigation. The data gathering questionnaire that was provided and accepted. For the purpose of gathering data, we adopted a non-probability convenience sampling approach. Workers voluntarily filled out the survey questionnaire. We got in touch with 250 workers. We got 228 completed questionnaires. Following thorough inspection and due to incomplete data, 32 replies were eliminated. The ultimate viable sample size was 196 and the response rate was 85%. Male respondents made up 53% of the data collected, while female respondents made up 47%. Sixty-nine percent of respondents (69%) were aged 36 to 45 or older.

Instrument

The present study was quantitative in nature, the data was collected from employees of IT sector. The data was collected from 196 respondents as sample was chosen by using random sampling technique. Questionnaire was divided into three sections namely Training & Development, Recruitment & Selection and Recognition. Responses collected was using Likert scale where 1 was strongly disagree to 5 being Strongly Agree.

Reliability

Testing the scale's dependability before using statistical methods is crucial since it reveals how well a scale delivers consistent results when measurements are repeated. This is received by identifying the correlation between values acquired from several scale observation. If the relationship is strong, the scale provides credible results that are consistent. The most used approach is Cronbach's alpha. It should be noted that although its value ranges from 0 to 1, a reasonable value of at least 0.6 is necessary for the scale to be taken as trustworthy (Malhotra, 2002; Cronbach, 1951). Thus, we employed Cronbach's alpha as a reliability indicator in the current investigation.

Case Processing Summary

		N	%
Cases	Valid	196	100.0
	Excluded ^a	0	.0
	Total	196	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.933	10

Data Analysis and Findings**Regression**

H1: Technology has positive impact on Recruitment & Selection

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	speedy, cost effective, smooth functioning ^b	.	Enter

a. Dependent Variable: At a larger level

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted Square R	Std. Error of the Estimate
1	.869 ^a	.755	.751	.31671

a. Predictors: (Constant), speedy, cost effective, smooth functioning

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	59.450	3	19.817	197.558	.000 ^b
Residual	19.259	192	.100		
Total	78.709	195			

a. Dependent Variable: At a larger level

b. Predictors: (Constant), speedy, cost effective, smooth functioning H2 – Technology has a positive impact on Training and development

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	speedy, cost effective, smooth functioning ^b	.	Enter

a. Dependent Variable: improvement of skill set

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.823 ^a	.678	.673	.41409

a. Predictors: (Constant), speedy, cost effective, smooth functioning

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	69.215	3	23.072	134.548	.000 ^b
	Residual	32.923	192	.171		
	Total	102.138	195			

a. Dependent Variable: improvement of skill set

b. Predictors: (Constant), speedy, cost effective, smooth functioning H3 – Technology has positive impact on recognition .

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	speedy, cost effective, smooth functioning ^b	.	Enter

a. Dependent Variable: brings all to common platform

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.870 ^a	.757	.753	.41409

a. Predictors: (Constant), speedy, cost effective, smooth functioning

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	102.358	3	34.119	198.975	.000 ^b
Residual	32.923	192	.171		
Total	135.281	195			

a. Dependent Variable: brings all to common platform

b. Predictors: (Constant), speedy, cost effective, smooth functioning

Table 1 Correlation Analysis

Technology			HR Practices
Metaverse	Pearson Correlation	Recruitment & Selection	0.372**
	Sig (2-tailed)		.000
Metaverse	Pearson Correlation	Training & Development	0.632***
	Sig (2-tailed)		.000
Metaverse	Pearson Correlation	Recognition	0.485***
	Sig (2-tailed)		.000

Findings

The statistical used is SPSS that proves H1, H2, H3 that is technology (metaverse) has positive impact on recruitment and selection, Training and development and Recognition as R square values are 0.775, 0.637 and 0.757 respectively. Therefore, metaverse impacts the functioning and operations of the organisation that makes the organisation more efficient and reduces the routine work and helps employees to enhance their skills and work towards attaining organisation goals.

The Pearson's correlation coefficient (r), which measures the amount of the link between the two variables, is a method for investigating the relationship between two quantitative, continuous variables. The outcome of the Pearson's Correlation

Coefficient between variables is displayed in Table (1). Metaverse and recruitment and selection were shown to be significantly correlated ($r = 0.372$, $p < 0.01$). Training and development have a strong link with the metaverse ($r = 0.632$, $p < 0.01$). Recognition and the metaverse are significantly related ($r = 0.485$, $p < 0.01$). The three HRM practices were included as dependent variables in the regression equations together with technology (metaverse) as an independent variable.

Challenges

Adoption won't be without its difficulties. Many businesses will find the cost exorbitant in the near future. Let's not forget that it took a long time for companies to go from desktops to laptops, not because

the desktops were superior, but rather because they were less expensive.

The usage of the metaverse will be constrained to those where there is a positive return on investment until access to it becomes affordable. There might be concerns about security. So this is a whole new method of organizing and accessing potentially extremely sensitive information. Not least among these will be the necessary cultural shift for adoption. To motivate employees and their bosses to embrace collaboration technologies broadly, it took a worldwide epidemic.

It will take time to encourage the use of the metaverse. Full acceptance might not happen until those office-bound Minecraft lovers arrive in the next 10 to 15 years. Yet it will happen, and it would be a massive error to dismiss this significant change and think of it as a fleeting trend. As technology integrates more deeply into how we work, HR directors must begin considering how they might utilise it, encourage other departments to use it, and get ready for a cultural shift. Because this is where the revolution in VR at work begins.

Conclusion

According to history, we will continue to be immersed in new technical settings, with experts attempting to comprehend the consequences of new technologies for HRM. Our findings suggest that when it comes to examining new technologies, HR experts may not need to reinvent the wheel. The methods used by HR researchers to address prior technologies may still give new insights for future researchers to examine forthcoming technology.

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