

## Role of Virtual Training in people empowerment in the era of Industry 4.0

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### ABSTRACT:

The advancement of knowledge technology has caused an evolutionary and paradigm shift in Virtual Training in the present scenario. The demand for company training has matured exponentially, allowing employees to be supplied with an emulated Virtual Training without attending the standard brick and mortar training. Over a decade, businesses are regularly using technology for improving their daily work with more efficiency. The organisations are using technology to deliver training for their staff due to a bundle of benefits like value saving in travel expenditures and training time, flexibility and delivery of coaching, diverse content accessibility, permanent use of resources within the corporate, enhancing worker productivity etc. Owing to globalization, many businesses began to depend upon Virtual Training, thanks to its potentiality to reach large groups of people in different districts or countries, decreasing costs and disseminating efficient information. For several individuals, Virtual Training is perceived as a preferred learning channel because of its global accessibility and reach. Through a click over the web, Virtual-Training is free from the constraints of time and place. The fourth industrial revolution (Industry 4.0) triggered by the development of information and communications technologies (ICT) provides a baseline for smart automation, using decentralized control and smart connectivity (e.g., Internet of Things). In order to make the “factory of the future” vision a reality, various requirements need to be met. There is a need to continuously qualify the human worker about new and changing technology trends since human resources are the most flexible entity in the production system. This demands introducing novel approaches for knowledge-delivery and skill transfer. A state-of-the-art training system is required to keep oneself updated on the relevant technologies. Virtual Training may be considered as the most acceptable solution to meet the present day challenges of coping up with the recent technological developments.

**Keywords:** Virtual Training, HRIS, Industry 4.0

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### I. INTRODUCTION

Virtual Training is defined as training that can functionally and effectively occur in the absence of traditional offline training environment. For the growth of the organization employee training is an important factor. Training allows employees to acquire new skills, upgrade their existing skills and this indirectly affects the improvement of the organization. A company is the sum total of what employees achieve individually, organizations should do everything in their power to ensure that

employees perform at their best. Training requires additional manpower, infrastructure and many other tools. Virtual Training plays a very vital role in such cases. This provides a virtual environment for training by which an organization can minimize their additional requirement of manpower or infrastructural or any other resources. Virtual Training is currently being used as a training tool in different areas including medicine, aviation and manufacturing. This study aims to find out how smartly employees are improving their skills

through Virtual Training and how organizations are getting benefited.

## II. A BRIEF REVIEW OF EXTANT LITERATURE

The demand for alternative methods for learning is increasing rapidly. The use of corporate electronic learning (E-learning) is on the rise as many corporations have adopted E-learning for employee training and learning to create a collaborative learning environment. Virtual Training is a technique designed to provide learning solutions using technology. Chen (2008) defined E-learning as combining technology with learning, delivered using telecommunication and information technologies, and a type of training delivered on a computer supporting learning and organizational goals. E-learning used by employees had varying correlations with job productivity, job performance, job satisfaction and organizational commitment. It was determined that the use of technology alone would not yield the desired results; corporations need to specify a balance between E-learning strategies and managerial support (Ellis and Kuznia, 2014). In spite of the growth of Virtual Training in different sectors and its perceived benefits, the efficiency of such technology will not be fully utilized if the users are inclined not to accept and use the system. Therefore, the successful implementation of Virtual Training depends on whether or not the employees are willing to adopt and accept the technology. It has thus become imperative for practitioners and policy makers to understand the factors affecting the user acceptance of web-based learning systems in order to enhance the students' learning experience (Tarhini et al., 2014a). However, recent studies have shown that e-learning implementation is not simply a technological solution, but also a process of many different factors such as social factors (Schepers and Wetzels, 2007; Tarhini et al., 2014b; 2015), individual factors (Liaw and Huang, 2011) and organizational factors such as facilitating conditions (Sun and Zhang, 2006), in addition to behavioural and cultural factors (Masoumi, 2010). Such major factors play an important role in how an information technology is developed and used (Kim and Moore, 2005).

The launch of Learning Management Systems (LMS) such as Blackboard, E-College, Sharable Content Object Reference Model (SCORM), Instructional Management Systems (IMS) and Aviation Industry Computer-Based Training Committee (AICC) would define the future of eLearning (Chen, 2008). The evolution of eLearning continued as communication and television technologies transformed learning and the

development of personal computers and the evolution of the internet drastically moved learning to the next level by adding a dynamic feature to learning: learners could interact synchronously or asynchronously with one another in the learning process. eLearning has experienced explosive growth over the last couple of decades. There are several reasons for this. The current increase in eLearning usage is fueled by the commitment of businesses centering the development of their training programs in eLearning technology. External forces such as cultural acceptance of eLearning have contributed to the use of eLearning for business purposes.

Some global companies use both Learning Management Systems (LMS) and a virtual corporate university platform to train stakeholders to ensure that employees are knowledgeable with updated skills and information. With the use of such systems, corporations can create and track individual training schedules. On the other hand, virtual corporate universities are more effective than LMS because they enable collaborative learning, facilitate the development of social training programs, allow interactive training, and support mobile learning. Bonk (2009) noted the emergence and increased use of online and blended learning, collaborative technology, digital books, open source software, and wireless and mobile learning. These learning trends in technology continue to transform Virtual Training, since many people who previously did not have access to online resources are now able to access learning materials with a click of a hyperlink from their mobile phones and computers. Virtual Training will be a driving force in business for educating and training employees in the workforce. Interests of corporate managers in this technology continue to grow due to just-in-time delivery and cost-effectiveness of e-courses (Schweizer, 2004). The success of Virtual Training depends on how organizations support and train employees to use learning technologies. Other contributing forces enabling the use of Virtual Training include senior management commitment, user-friendly and effective courses, corporate investment in human capital, and organizational culture supporting innovations and changes (Schweizer, 2004). Honey (2000) states: "Ninety percent of users indicated that Virtual Training had been useful to them. Some 81% of providers and 66% of employers agreed that Virtual Training would bring 'huge advances' in an organization's capacity to learn.

## III. RESEARCH OBJECTIVE

The objective of this work is to explore whether Virtual Training empowers people with their skill

and also impacts business performance in different sectors.

#### IV. METHODOLOGY

The methodology used for this paper is descriptive research. Data are collected from published research papers, articles and other materials from different journals available both online and offline. EBSCO database is also used for data collection.

#### V. FINDINGS AND ANALYSIS

A training program allows employees to strengthen their skills that each employee needs to improve. A development program brings all employees to a higher level so that they all have similar skills and knowledge. This helps to reduce any weak links within the company which relies heavily on human resources to complete basic work tasks. We know the success of any physical training from different journal articles, books and other published materials. Now literature study further reveals that the use of Virtual Training has been proved to be cost effective because of its global reach, collaboration tools and social learning. With shrinking corporate budgets, the Virtual Training platform seems to be the preferred learning method over traditional ones because it provides an adaptable and engaging learning experience for employees for every organization. All organizations use Virtual Training for training new recruits, for leadership and management development and continuing professional education. Virtual Training is also being employed for client training, sales training and partner training. With 24/7 access to materials from a click of a PC or tablet, employees can access and track their assessment and course completion rates. According to Chen (2008):

*“Seventy-four percent of organizations surveyed used synchronous learning. The reason for its high usage is that in recent years technology has advanced dramatically allowing for a more seamlessly integrated online training approach. Synchronous learning coupled with technology allows for greater interaction between instructors and learners including the opportunity to develop ideas, solve complex problems, and develop critical thinking skills. This type of creative thinking produces a competitive advantage for companies who desire to develop these strategic types of skills within their employees. (p. 3)”*

Virtual Training trends continue to be positive because of the easy of learning coming to people as opposed to people finding it. At the same time, without motivation from top management, these trends will not be implemented as part of

Virtual Training strategy. Newton and Donga (2007) provide employers' viewpoints and justifications for corporate involvement in eLearning. These include increase in knowledge, efficiency and productivity of employees, ease of implementation, time-flexible savings, and cost savings. Other benefits of eTraining are the ability to deliver eTraining anywhere, anytime and to anyone; just-in-time training; personalized training leading to higher content retention by learners; effective delivery compliance training; higher collaboration and interactivity; better monitoring system on employees' performance and progress; and customized and personalized training options.

With rapidly changing learning technologies, Virtual Training implementation is not simply just purchasing sophisticated learning management systems. It also requires training employees properly to use the new technologies.

Ozturan and Kutlu (2010) examined employee satisfaction with corporate eTraining or Virtual Training programs using regression analysis to determine the influence of gender, age, work experience, education level, job level and interactivity level of the employees. When the predictor variables were tested using regression analysis, they were determined to be statistically significant, with job level having the highest maximum impact on employee satisfaction. Means employees are also satisfied with Virtual Training. Now we are in the era of technological advancement in which this is the smarter choice for any organization.

There is a distinct need to invest in employees to improve their competencies because of the changing demand for skills in the Industry 4.0 environment (Ninan et al., 2019). The need for training and development in the era of Industrial Revolution 4.0 is required for digital fluency, technological savviness and data analytics. These are skills and capabilities that previous generations of manufacturing workers just did not need and for which future generations may not be fully prepared. Operationally intensive companies have entered a new wave of automation and digitization. That will have a big impact on the skills they need to remain competitive. Manufacturers should be actively investing in their workforce through retraining efforts and upgrading employees' current skill sets so they can manage automated processes or take on "creative" jobs that are less likely to be replaced by automation. In addition, as automated tasks are phased in, simultaneously training existing workers with the incremental skills needed for higher-level jobs (e.g., data analysis, process improvements) can help to mitigate the perceived threat of automation. Management and human resources should take an

active role in this process, identifying high-potential employees with the education and training that would align with higher-skill positions, and identifying those individuals who are most likely to stay with the company over the long term.

The transition to the automation revolution has been accelerated by the COVID-19 pandemic. Companies are emerging from the crisis into a world of workplace physical distancing and major changes in customer behaviour and preferences. Recovery is forcing organizations to re-design their operations for the next normal. Manufacturing companies are reconfiguring their supply chains and their production lines. Service organizations are adapting to emphasize digital-first customer journeys and contactless operations. Those changes will have significant effects on the requirements for workforce skills and capabilities, from a dramatic increase in home-based and remote working to a need for shop-floor personnel to master new tools and newly urgent health and safety requirements.

In this age, the Virtual Learning environment provides precisely what clients need through a website that delivers courses, content, videos and access to experts (including recommendation engines). Employees learn through coaching and facilitation. They can draw learning opportunities and they navigate and access the same from within and outside the company. External training is accessible through any online source. Training professionals are experts from inside and outside the organization, who are excellent in their domain. Virtual Training in the Industry 4.0 era is demonstrable and takes the benefit of case studies and experiential learning.

## VI. CONCLUSION

To conclude, Virtual Training continues to be a driving force in many organizations as a learning and training tool. Technological advancements, especially the implementation of different learning management system (LMS) platforms, are facilitating Virtual Training in today's context. It is important to understand the importance of Virtual Training not only from the financial aspect but also from a humanistic perspective especially with employee satisfaction. We help customers become more sustainable and profitable across engineering and operations, and maximize asset, production and supply chain performance.

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