

Chapter 6

Impact of Industry 4.0: Preparing the Future Workforce

Paramita Bhattacharya
HELP University, Malaysia

ABSTRACT

Recent research findings indicate the need to transform the way human capital is utilized, given the technological disruption in the current business environment. This chapter aims to discuss the fundamental prerequisites necessary to bring this change, for instance, higher order critical thinking, complex problem solving, focusing on fluid intelligence, and adaptability, among others. The author also provides insights into how these changes can be successfully incorporated through cognitive diversity, hybrid competencies, and understanding millennia's changing values and integrate them in the learning process.

INTRODUCTION

In this era of discontinuous change, a one size fits all approach doesn't work anymore. This occurrence is mainly due to the business environment becoming more global and technology becoming a major driver revolutionizing the world around people. The change drivers are accelerating in parallel all over the world, whether in developing or advanced country.

A significant evolution is happening currently as organizations have started to realize the importance of being agile (Twaronite & Schreiber, 2018). Findings by Gabrielle Cichero suggest that in future it is highly likely that more than 75% of all jobs are in the "STEM" field (Science, Technology, Engineering, and Mathematics).

DOI: 10.4018/978-1-7998-5514-9.ch006

Twenty years from now, almost one half of the current jobs will cease to exist. Thus, it is imperative for organizations to think from a long-term perspective and plan accordingly (Cichero, 2017). The “fourth industrial revolution” is a broad umbrella under which technology is revolutionizing not only organizations but also the daily lives of people. In a study of 1600 C-level executives across many nations, about 90% believe that “fourth industrial revolution” will have a bigger impact than governments in shaping the future (Renjen, 2019). This chapter thus aims to understand the present business milieu and the need to re-strategize the way human capital is utilized.

UNDERSTANDING THE CONTINUOUS DISRUPTION OF THE CURRENT BUSINESS ENVIRONMENT

A recent study by EY to analyze the root causes of this disruption, revealed three main factors: “technology”, “globalization” and “demographics” (The upside of Disruption, 2017). The technological advancements have been impacting businesses since a very long time, whether its industrial revolution or the IT wave at the turn of the twenty first century. “Globalization” on the other hand has made the world a much smaller place. Around the world, the barriers in businesses have reduced considerably, thus accelerating their growth.

Demographics play a vital role in determining the business and economy settings. Most of the workplaces today across different countries are dominated by the “millennial”. Migration and urbanization have become the norm influencing the growth and development of economies (The upside of Disruption, 2017). These demographic changes have forced businesses and governments to change the way they operate and re-strategize. Due to this revolution, businesses have come under immense stress with new entrants in the market almost every other day, thus intensifying competition (Brown, Hagel, deMaar, & Wooll, 2016).

This transformation has caused companies to aggressively adapt themselves in order to stay relevant in the current scenario. This revolution is undoubtedly one of the most complex that businesses have ever encountered. The rate at which the business landscape is evolving is no longer linear but exponential.

The primary causes of disruption are continuously unfolding and giving rise to a series of “megatrends”. Eight global megatrends have been identified that are shaping the future - from Artificial Intelligence (AI) to 3D printing, machine learning to nanotechnology, rapidly growing urbanization to a rise in sustainable business practices. These megatrends are transformative in nature and have a tremendous influence on economies, businesses, trades, industries and even societies, and have seen enormous growth like never before (Schwab, 2016). One such impactful

12 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/impact-of-industry-40/256948

Related Content

Emotional Intelligence and Personality Traits as Predictors of Job Performance of IT Employees

Priyam Dhaniand Tanu Sharma (2018). *International Journal of Human Capital and Information Technology Professionals* (pp. 70-83).

www.irma-international.org/article/emotional-intelligence-and-personality-traits-as-predictors-of-job-performance-of-it-employees/205653

Role of Emotional Intelligence in Managing Interpersonal Relations at Workplace in the IT Sector

Vinita Sinha (2018). *International Journal of Human Capital and Information Technology Professionals* (pp. 72-87).

www.irma-international.org/article/role-of-emotional-intelligence-in-managing-interpersonal-relations-at-workplace-in-the-it-sector/212359

How Are Innovation, Growth, and HCIF Affected by Natural Resources?

Seyed Mohammad Amir Mousavi (2019). *Global Perspectives on Human Capital-Intensive Firms* (pp. 121-154).

www.irma-international.org/chapter/how-are-innovation-growth-and-hcif-affected-by-natural-resources/218486

Identification and Assessment of Mental Tasks Using Task Flowcharts

Juan Luis Hernández-Arellano, J. Nieves Serratos-Perezand Aide Aracely Maldonado Macías (2017). *Strategic Human Capital Development and Management in Emerging Economies* (pp. 1-19).

www.irma-international.org/chapter/identification-and-assessment-of-mental-tasks-using-task-flowcharts/174867

Trustworthiness

(2022). *Analyzing Telework, Trustworthiness, and Performance Using Leader-Member Exchange: COVID-19 Perspective* (pp. 73-84).

www.irma-international.org/chapter/trustworthiness/290249