

Developing curriculum for industry 4.0: digital workplaces

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industry 4.0

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Abstract

Purpose – The purpose of this paper is to introduce a framework used in a program for working executives, designed to prepare them for the digital workplace environment of industry 4.0.

Design/methodology/approach – The paper adopts a case-based approach. It presents the current context about industry 4.0 and digitized workplaces. It then describes the case of designing the curriculum for a learning program on this theme, the responses received from participants and facilitators and conclusions that can be drawn from the responses.

Findings – The findings indicate that digital workplaces present challenges such as fragmentation of work, a resultant disconnect between team members, an uncertainty about assessment of efforts as well as assessment of output. Facilitation by coaches, extensive documentation, knowledge sharing, empathy and an alignment to shared goals mitigate these challenges to some extent. Facilitation also enables the participants to experience the true benefits of technology aided collaboration.

Research limitations/implications – The participants in the program had an average work experience of two years, and a senior management view was not represented.

Practical implications – The learning from the program would help in designing more such collaborative and immersive learning experiences.

Social implications – Programs about virtualization and automation of work processes enable an appreciation of the inherent challenges and shortcomings and a fairer implementation of technologies at the workplace.

Originality/value – The program brought into the classroom an immersive experience of the evolving dynamics between employers, digital technologies and employees of contemporary workplaces.

Keywords Knowledge sharing, Curriculum development, Virtual collaboration, Industry 4.0, Digital workplaces

Paper type Case study

Introduction

Digital technologies are transforming industry, products, processes and operations. The nature of the workplace is changing in organizations that are working with contemporary technologies such as embedded systems and Internet of Things (IoT). The reliance on technology for management activities of planning, monitoring, implementing and auditing means that the interfaces for connecting people and managing work have also been changing. The anytime and anywhere nature of work implies that the work force is connected more to each other over computers, mobiles and tablets, rather than face to face (Bolat *et al.*, 2016). The “digital world” was at first meant to include the technologies for social media, mobile, analytics and cloud computing. It now also encompasses cognitive computing and artificial intelligence (AI). The expectations of employees at digital workplaces include automation of all routine processes, with inbuilt AI (Shivakumar, 2020). The demand for convenience, easy access and usability are driving systems and processes in organizations, bringing attendant challenges of data privacy and security issues.

Organizations expect features of the digital world such as ease of use, convenience, transparency and equity in policy administration from their leaders, just as they expect

