Chapter 1

Information Profession in Digital Transformation and Development:
Future Directions

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ABSTRACT

Industrial revolutions have changed and transformed humanity and society over time and continue to advance development with evidence across disciplines and professions. The purpose was to explore where the information profession and discipline fit in the broad spectrum of digital transformation and development. It aimed to examine the extent to which digital transformation has enhanced information management in organizations; find out real case applications of the digital transformation and development in information organizations; establish emerging digital technologies in the context of data, information, and knowledge in organizations; and determine professional dimensions and directions imperative for sustaining future digital innovations in organizations. Digital transformation, sustainable development, and the information profession are triple principal forces of human and societal change. The information profession and discipline has influenced and advanced digital transformation through data, information, knowledge, technology, people, and services.

INTRODUCTION

Digital transformation remains one of the emerging priorities that affect human knowledge, professions and organizations. With sustainable development the impact of the information profession is fundamental in societal transformation. Methodological approach was based on electronic Delphi research where knowledge and ideas were shared from information professionals and experts involved in aspects of digital transformation and information practices in organizations. This research approach used brainstorming, selection and ranking in data collection and analysis and presentation of information. Information professionals sustain and manage data, information, knowledge and technology and people, and therefore fundamental in the fourth industrial revolution. Based on the principles of Delphi method, expert opinions and thoughts were sought from information professionals with advanced knowledge and working experience.

BACKGROUND INFORMATION

Digital innovations and emergent technologies have radically impacted and changed human life, industries, organizations and professions. The fourth industrial revolution (4IR) introduces avalanche of digital technologies that include Internet of Things (IoT), artificial intelligence, big data, additive manufacturing, 3D printing, blockchains and droves (African Development Bank, 2019 & World Economic Forum, 2019). With the potential to transform societies and economies, these disruptive technologies are digital innovations that have transformed industries, organizations and homes across the world. Fourth industrial revolution also known as industry 4.0 birthed and invented the digital transformation in 2016, while the sustainable development practices began in 2015 in order to change and transform societies. Most important, the driving forces for the growth of the knowledge society include education, new technologies, faster and more wide-reaching dissemination of information, globalization of the economy, and political, cultural and human relations (Johannessen, 2019; Abd, 2017; Ford, 2016). Sustainable development goals is the overall plan for positive change and improvement in any given society as related to individual progress, which covers wide range of interrelated issues in environmental, economic, social, and political, whose aim is to ensure that all people enjoy peace and prosperity in 2030 (Nicholas & Perpetual, 2015).

Information is the dominant logic in the emergence of the 4IR in the knowledge society (Johannessen, 2019). In equal measure, the information profession as the fundamental resource for sustainable development and societal transformation manages data, information, knowledge, technology and people. Domain economies and sectors have embraced the potential realities of the 4IR, sustainable development policies and information perspectives as exemplified in industries and manufacturing, businesses, health and wellbeing, energy and agriculture. According to Ex Libris A ProQuest Co (2019), first, in the world of finance, artificial intelligence (AI) and machine learning are used to analyze large number of disparate data sets to identify risk and help investors make smart decisions. Second, in health care, the technology is used to design the best treatment plans and recommend personalized care based on patient information. Third, businesses use artificial intelligence to analyze massive amounts of data on customer preferences and behaviors to know the products to market. Fourth, the potential of artificial intelligence among research libraries has remained largely untapped, with only about five percent leveraging the technology. These principal causes form the underlying perspectives of the information profession and

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