Preparing for a New World of Work: Leadership Styles Reconfigured in the Digital Age

Laura BENCHEA
Bucharest University of Economic Studies, Romania
laura.benchea@rei.ase.ro

Anca Gabriela ILIE
Bucharest University of Economic Studies, Romania
anca.ilie@rei.ase.ro

Abstract
As a consequence of the accelerated technological developments (artificial intelligence, robots, automation, quantum computing etc.) that humankind has developed over the latest decades, inquiries about the impact of these powerful technologies and digitalization over professional work have emerged in the business and academic spheres. Since digital transformation involves, among others, giving rise to new ways of sharing practical expertise and leading organizations, it has strong implications on leadership practice, in terms of new styles, skills, competences and other capabilities needed to implement this change and to successfully navigate organizations through the new wave of technological disruption. Against this backdrop, the aim of this paper is to identify patterns and trends across professions in general and how they were transformed by technology. In addition, the paper explores how executives prepare for the new world of work and which leadership styles are on the brink of fundamental change and are particularly relevant for the digital world.

Keywords: leadership; digital age; technology; agile leaders;

JEL Classification: M12; M15; O33;

DOI: http://doi.org/10.24818/ejis.2023.10

1. Introduction

Technology lies at the core of most of the transformations that reconfigure the professional work today. It is changing our world so profoundly that children in school today will hold jobs that do not exist today. A study carried out by Dell and The Institute for the Future forecasts that 85% of jobs that will be available in 2030 have not been invented yet (Marr, 2022). Robots, artificial intelligence (AI), mobile sensors, 3-D printing and many other technological inventions are no longer a futuristic vision, but rather a current reality that performs quite well and transforms human life (West, 2015) in ways that the human mind could hardly have conceived and anticipated before, with the exception of the science fiction literature. Technological change along with other mega-trends such as demographic trend, globalization and socio-economic factors that shape today's society are altering the fundamental nature of education and work (European Commission, 2019).

The digital transformation does not involve only the development of technologies and devices, but it is mainly concerned with the integration of data into everything we do, from business workflows to personal streams of life (IDC, 2018). Some authors (Vogelsang, 2010) describe the digital transformation as *the 5th Kondratiev wave* which not only changes

the production processes, systems, and possibilities, but directly affects our way of living. Even more, he asserts that "*after the steam, steel, electricity, and petrochemical revolutions, network-based digitalization is the driving force today on the stage of business and private life*" (Vogelsang, 2010 cited by Khan, 2016). According to Mosteanu (2019), "digitization" and "digital transformations" have been the most common used words over the latest decade, with a plethora of definitions intended to describe the offline-to-online migration of commercial operations and businesses.

In the world of work, the digital revolution is causing significant transformations: while some jobs are at risk to be replaced by machines, others are being transformed, and new job opportunities arise. Even more, digital literacy skills will become hard currency, but soft skills that are related to personality and personal attributes (creativity, critical thinking, emotional intelligence, entrepreneurial spirit, cultural intelligence and diversity consciousness, ethical awareness) are increasingly necessary to cultivate in order to differentiate and succeed in this new world of work. In other words, the skillset and competences needed to be acquired are significantly digitally based, but they also lean towards softer skills, basically the things that machines cannot do. According to the European Commission, in 2017, 10% of the EU labor force had no digital skills at all (EC, 2019). In this context, many leaders find it difficult to cope with the increasing pace of transformations and unpredictability fueled by digitalization. Even more, according to Gale (2019), leadership in the digital age is fundamentally different and clearly differentiate from their "heroic predecessors". Only 28% of the major corporations are successful with the digital transformations Gale (2019), and the reason is that being successful in the digital world requires the willingness and effort to equip with the new set of essential skills, attributes, and competences, as well as the courage and capacity to adapt to the new technological trends. For this reason, the aim of this paper is to identify patterns and trends across professions in general and how they were transformed by technology. In addition, the paper explores how executives prepare for the new world of work and which leadership styles are on the brink of fundamental change and are particularly relevant for the digital world.

2. Methodology

The paper is an exploratory research, based on investigative techniques which imply the collection and selection of the relevant literature in the field (scientific journals, documents, online resources) and the analysis and interpretation of the collected material, with focus on ideas, concepts, and insights. This research focuses on capturing the way professional work is being reconfigured under the impact of new technologies, systems, and digitalization. The aim is to understand and explain the theoretical framework, and to add statistical data in order to defend the argument.

3. Leadership: Conceptual delimitation

Leadership is a complex topic and has been extensively studied for decades in the literature on management and organizational behavior. There is no commonly agreed upon definition of leadership, as researchers and practitioners tend to define it according to their individual

perspective and those aspects that interest them the most. Back in time, in 1974, after a comprehensive review of leadership literature, Stogdill (1974) concluded that "*there are almost as many definitions of leadership as there are persons who have attempted to define the concept*" (Yukl, 1989). It seems that the perspective doesn't differ too much nowadays and, beyond definitions that commonly refer to individual characteristics, interaction patterns, role relationship or followers' perceptions, most definitions on leadership "agree" on the influence process (on followers, tasks, or organizational culture) (Yukl, 1989).

Even though a consensus on a *standard* definition of leadership hasn't been reached, research generally focus on some common individual features which describe effective leadership: full commitment, people orientation (social skills), continuing education, and willingness to take on tough assignments (Hartman et al., 2007). Conger (2004) believes that individual traits such as confidence, achievement drive and interpersonal skills are essential to successful leadership. In his famous book, *Emotional Intelligence*, Goleman (2001) adds emotional intelligence competences (self- knowledge, self-control, optimism, ambition, the capacity for self-motivation) as key factors for success, while others (Kellet et al., 2006) refer to the ability to analyze and solve problems, and to relate to others. On this segment of inspirational perspective, Covey (2004) defines leadership as the process of "*communicating to the people their worth and potential so clearly that they come to see it in themselves*" (Le, 2015). Marr (2022) identifies as the most important leadership skills the capacity to motivate others, to recognize and foster potential, to inspire trust, to take on or give up responsibility, to build teams, to be authentic and think positively. Despite the multitude of ways in which leadership has been conceptualized, Northouse (2013) proposes the simplest definition which basically incorporates many of the above-mentioned components: "*Leadership is a process whereby an individual influences a group of individuals to achieve a common goal*".

As new technologies are increasingly incorporated into the workplace and daily life, they are posed to fundamentally upend the way things are done, businesses are developed, or leadership goals are achieved. Since digital transformation involves the reshaping of businesses, markets and the structure of organizations, the implication on leadership practice is stronger and theory relates to leaders to implement this change that should be endogenously and proactively created (Korhonen, 2015). The literature on leadership in the digital age has tried to grasp the current technological trend and to capture new insights about the most important leadership skills to acquire in order to be successful in the digital era (Wilson, 2004, Sahyaja and Rao, 2018, Oberer and Erkollar, 2018). Although many core leadership skills remain the same, the digital era requires the adoption of some traits that leaders find as most critical: transformative vision, forward-looking perspective, change-orientation, or digital literacy (Kane et al., 2019). Beyond the mission to provide a vision that rallies everyone around a common goal, in particular, leaders must reassure that new technologies and digitalization enhance rather diminish or even eliminate employees' roles within the organization (HBR, 2021).

4. The Evolution of Professional Work. Patterns and Trends across Professions

4.1 Transformation by technology

The impact of any technology on professions in the digital age can be included in two main categories: automation and innovation. "*Automation* is the comfort zone of technological change for most professionals": it doesn't discard the old way of operating, but it rather focuses on the optimization and cost-saving of the administrative work (Susskind and Susskind, 2015). According to a survey carried out by PricewaterhouseCoopers (PwC) in 2018, AI, robotics and other forms of "smart" automation have the potential to generate huge economic benefits, respectively $15 trillion to global GDP by 2030. On the other hand, estimates show that by the mid 30's up to 30% of jobs will be automatable, with significant differences by industry sector, and with 44 % of workers with low education at risk. In the short term, the financial services sector is highly impacted by automation, with algorithms creating faster and better analyses and assessments, while the transportation sector will be impacted in the long run, with the development of autonomous driverless vehicles (PwC, 2018). As automation inevitably eliminates human work in manual business processes, leaders, specifically, are faced with the responsibility of equipping employees with the skill set that will allow for greater employee retention in the long run, and generate active engagement around reskilling initiatives (through education and training programs that enable employees to discover their skills, identify gaps, and harness their potential through customized knowledge paths and plans (HBR, 2021).

When it comes to *innovation*, it impacts the professional work in two ways: firstly, the innovative systems may provide products and services at lower costs or higher quality than before. The other way refers to the possibility to offer new forms of services that do not replace the existing ones, but they provide access to practical expertise where it was not possible or affordable in the past (for example, in education, the Massive Open Online Courses (MOOCs) created by some of the top educational institutions provide education and expertise to people who otherwise couldn't have access to it) (Susskind and Susskind, 2015). In the long run, most of the technologies that will impact and change professions will be innovative technologies, systems that will make practical expertise available in ways never met before, along with the work that is being streamlined and optimized through automation.

4.2 Major trends of professions in the digital era: move from handcrafting to processes

The diffusion of digital technologies at workplaces has deeply transformed labor activities. From this perspective, research suggest that there are three core trends which reflect the transition from handcrafting to process in the digital world (Susskind and Susskind, 2015):

a) *Routinization and digitization*: indicate pre-established or pre-settled procedures and processes, executed or not by computer systems, which help routinize some tasks and bring greater efficiency and productivity of work (protocols, checklists, standard-form papers etc.);
b) *Disintermediation*: the removal from the supply chain of intermediaries whose traditional work is now challenged by online services (for example, travel arrangements, including insurance policies, can now be met without the involvement of a human agent; or, to some extent doctors can be disintermediated by diagnostic apps, professors by MOOCs, journalists by blogging etc.);

c) *Decomposition*: professional work is no longer regarded as a monolithic structure, indivisible block of endeavour and it is "disaggregated", broken down into different tasks and carried out by specialists who can execute each type of task with efficiency and consistent with the quality required. The idea behind this approach is to identify how different tasks or processes can be carried out more effectively (as the term "division of labour" was applied to manufacturing) and then pulled together into one coherent offering.

5. New Age, New Styles of Leadership. Incorporating Hard and Soft Skills for a Digital World

Since different epochs generate different styles of leadership, the new societal conditions of the digital age reconfigure new styles of leadership which require upended skills, knowledge, competences, and other capabilities, achieved through unique professional experiences responsive to the current conditions (Wilson, 2004). In an AI-driven world, the potential for companies who embrace digital models is immense, but there is also capacity for widespread harm, therefore navigating these opportunities and threats requires new knowledge and new competences for successful leadership in this new environment:

5.1. Digital literacy and openness to technology

Digital literacy refers to the digital skills needed to learn, work, and navigate everyday life in this technology-driven society. It means being capable to comfortably interact with technologies and being confident in digital skills, from the basic to some more advanced capabilities (Marr, 2022). Some professionals are sceptical or dismissal of any technological "intrusion" into their lives. Others find it difficult to acquire new technical skills or to integrate new software into their lives after a certain age, be it out of fear of the unknown or as a cognitive bias to compare with the younger people who seem to be more talented or capable of handling the new technologies. Anyway, it is well documented that anyone who puts in effort, training and commitment can become an advanced user of any of the latest systems (Susskind and Susskind, 2015). Understanding technology is one of the most important skills for two reasons (Kane et al., 2019): first, a digital leader has to keep pace with the emerging trends and developments in the field, and being digitally literate implies being capable of grasping those trends that might bring value or represent a threat to the organization; second, understanding how technology works, enables leaders to make better decisions in an uncertain and complex business environment.

5.2. Mastery of data (Big Data)

Data has been referred to as "the oil of the 21st century", as lifesaving as water, and some other clichés or over-hyped terms (Morrow, 2021). In fact, data is truly an asset that can help develop stronger understanding and knowledge, generate competitive advantage, and create new business opportunities, not just because its marketing application, but because information itself can monetized. The potential of Big Data "*spans every area of social activity, from the processing of human language and the management of financial assets, to the harnessing of information enabling large cities to manage the balance between energy consumption and production*" (Helbing, 2015).

For most professionals, mastering this skill is the only power that makes them stand out in relation to their competitors. Being able to analyze and interpret large amount of data can

yield useful insights and take the best decisions in any given industry and given position. More than 5 billion consumers interact with data every day, and by 2025 about 75% of the world population will be involved in the digital world. The global datasphere, "*a measure of all new data that is captured, created and replicated in any given year across the globe*", will grow from 33 zettabytes in 2018 to 175 zettabytes by 2025 (IDC, 2018). Therefore, the capacity to process large amount of information and retrieve the most appropriate information needed in the decision-making process can make a huge difference for the organization in the competitive business environment.

5.3. Knowledge diversification

In this context, diversification refers to the expansion of leaders' area of expertise and the immersion into new disciplines in order to escape the traditional boundaries of the profession and embrace a more holistic approach in order to better meet clients' (and employees') needs. For example, an advertising campaign ran by Ernst & Whinney (predecessor of Ernst & Young) in the mid 1980's had the following slogan: "*We don't just add up. We also help you multiply*", symbolizing their evolution from just being accountants to the more holistic formula of business advisors (Susskind and Susskind, 2015).

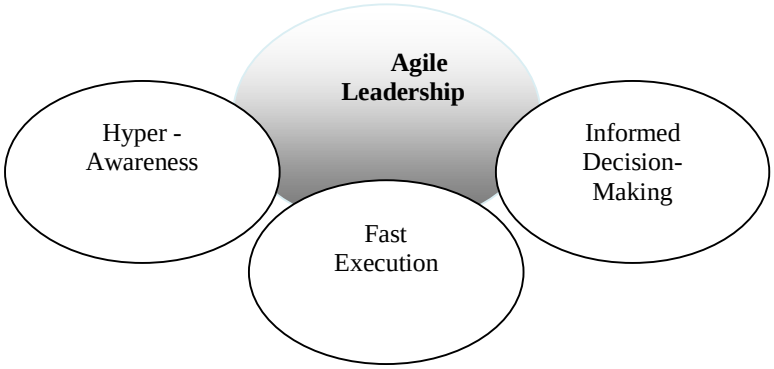
A study carried out by Accenture (on 1770 managers from 14 countries and 37 interviews with executives in charge of digital transformation) and published in Harvard Business Review (Kolbjornsrud et al., 2016) revealed five practices that successful leaders need to master in the digital age:

1) execute the administrative work with AI - some administrative tasks can be easily performed by the new technology, leaving managers time for high-impact and priority activities;
2) focus on judgement work - managers have already identified the skills needed to succeed in the future: creative thinking, experimentation, data analysis, interpretation, and strategy development;
3) approach AI machines as interaction with "colleagues" (assistant or adviser) in order to elude the "race against machines". Most of the surveyed managers (78%) believe that intelligent machines can assist in decision making, as well as in search or discovery activities;
4) develop the design-thinking approach or work like a designer, that is creativity and curiosity need to be brought in management. Manager-designers' ability to harness others' creativity and put together different ideas into integrated and appealing solutions is a key skill for success in the digital age;
5) develop social skills (networking and collaboration) which are essential to stand out, as well as to keep in touch with clients and partners.

Since automation and the adoption of digital technology reshape work and the skills needed for work, there is an increasing demand nowadays for cognitive skills (critical thinking and problem-solving), socio-behavioral skills (curiosity and creativity) and adaptability (World Bank, 2019). Much other research tried to capture the impact of digital disruption among organizations and their leaders' perception in regard to how to better approach this trend in terms of knowledge, skills and personal characteristics. Another study carried out in 2017 on 1042 respondents from 17 industries, executives were interviewed about the magnitude of change that affect their organizations: 33% considered the impact of digital disruption "very significant" and only 7% "not at all significant" (Neubauer et al., 2017). Leadership has been historically associated with some key characteristics, a few universal behaviors and competences, such as integrity, judgment, decision-making, resilience, analytical skills,

as well as communication skills. Nowadays, the "agile leadership" prepared for the digital world must master a set of three capabilities that are vital for their success in this competitive environment: hyperawareness, informed decision-making and fast execution (***Figure 1***).

Figure 1. Characteristics of an agile leader



Source: Adapted after Neubauer et al. (2017)

- **Hyper-awareness** refers to the constant scanning of the inside and outside environment in order to find opportunities and identify potential threats. One way in which leaders can practice hyper-awareness in this digital world is to keep up with the technological trends in their industry (62% of the "agile leaders" monitor relevant advances in their industry).
- **Informed decision-making** is the result of proper data collection, effective analysis and informed decision. In this context, leaders in the digital age understand the importance of new technologies and systems, basing their decisions on facts and data.
- **Fast execution** refers to the willingness to act quickly, often valuing speed over perfection. The ability to act quickly and to take fast decisions in this world of rapid transformations is one of the most important determinants for success regardless of the barriers (organizational, fiscal, structural, or cultural). Under such pressure, mistakes are being made, but "agile leaders" of the digital era take risks and 84% of the respondents think of mistake as an opportunity to learn.

Out of the 1042 executives interviewed, 29% (304) were considered *agile leaders*, 28% non-agile, and 43% in transition. Agile leaders were more capable of applying the three characteristics (hyper-awareness, informed decision-making and fast execution) in a more balanced way, while the others applied just one or none of these behaviors, which conducted to sub-optimal outcomes (Neubauer et al., 2017).

6. Conclusion

There is no doubt that the digital revolution has had a profound influence on the practice of business activity, without changing its fundamental functions, but mainly its texture, constantly challenging leaders to adjust in order to be successful and competitive in the new digital landscape. The digital transformation does not involve only the development of new technologies, systems, and devices, but it also implies the integration of the data flows into the business processes and strategies in order to make informed decisions. This trend of technological progress has generated new business models, has disrupted

production processes and marketplaces, and consequently has reconfigured professional work in such a way adapting and learning new skills is mandatory in order to succeed in this digital and technological environment. The aim of this paper is to identify patterns and trends across professions in general and how they were transformed by technology and to identify what leadership styles and characteristics are mostly required in the era of digital disruption. The results show that there should be a healthy blend of both traditional core skills cultivated in the past and the adoption of new professional competences and personal traits which are most compatible with the digital world. As results show, there is a high demand for digital skills (technical skills, data literacy), cognitive skills (critical thinking and problem-solving), socio-behavioral skills (curiosity and creativity), adaptability, as well as characteristics and actions specific to the "agile leaders": hyper-awareness, informed decision-making and fast execution.

Acknowledgement: This research paper has been developed and updated by the authors, after being presented within the works of the 37th IBIMA Conference, 30-31 May 2021, Cordoba, Spain.

References:

Conger, J. (2004). Developing Leadership Capability: What's inside the Black Box?, *The Academy of Management Executive*, 18(3), 136-139.

Covey, S.R. (2004). *The 8th habit: From Effectiveness to Greatness*. New York: Free Press.

European Commission (2019). The changing world of work and skills in the digital age. EU Science Hub. https://ec.europa.eu/jrc/en/news/changing-world-work-and-skills-digital-age

Gale, M. (2019). Data Research Shows Leadership in A Digital Age Is Fundamentally Different Than Our Heroic Predecessors, But Why? *Forbes.* https://www.forbes.com/sites/forbesinsights/2019/08/07/data-research-shows-leadership-in-a-digital-age-is-fundamentally-different-than-our-heroic-predecessors-but-why/?sh=611b21ab7a3b

Goleman, D. (2001). *Emotional Intelligence*, Curtea Veche Publishing, Bucharest.

Hartman, N., Conklin, T., & Smith, J. (2007). What Leaders Say Versus What Academics Write: the Relevance of Leadership Theory, *SAM Advanced Management Journal*, Society for Advancement of Management.

Harvard Business Review (2021). How to Build Your Digital Intelligence. Understand Emerging Technologies, Thrive in the Digital Workplace, and Lead the Transformation of Your Business, Summer 2021.

Helbing. D. (2015). Societal, Economic, Ethical and Legal Challenges of the Digital Revolution: From Big Data to Deep Learning, Artificial Intelligence, and Manipulative Technologies. *SSRN Electronic Journal.*

IDC (2018). The Digitization of the World from Edge to Core. https://www.seagate.com/files/www-content/our-story/trends/files/idc-seagate-dataage-whitepaper.pdf

Kane, G.C., Phillips, A.N., Copulsky, J. & Andrus, G. (2019). How Digital Leadership Is(n't) Different, *MIT Sloan Management Review*, Spring 2019.

Kellet, J.B., Humphrey, R.H. & Sleeth, R.G. (2006). Empathy and the Emergence of Task and Relations Leaders, *The Leadership Quarterly*, 17, 146–162.

Khan, S. (2016). Leadership in the Digital Age – A Study on the Effects of Digitalisation on Top Management Leadership, *Stockholm Business School*.

Korhonen, J.J. (2015). The Changing Role of the CIO. In: Collin, J., Hiekkanen, K., Korhonen, J.J., Halén, M., Itälä, T., Helenius, M., (2015). IT Leadership in Transition. The Impact of Digitalization on Finnish Organizations. Research report, Aalto University. Department of Computer Science.

Kolbjornsrud, V., Amico, R. & Thomas, J.T. (2016). How Artificial Intelligence Will Redefine Management, *Harvard Business Review*, Nov. 2016.

Le, B.P. (2015). Academic Library Leadership in the Digital Age. *Library Management*, 36(4/5), 300-314.

Marr, B. (2022). *Future Skills: the 20 Skills and Competences Everyone Needs to Know to Succeed in a Digital World*, Wiley.

Morrow, J. (2021). *Be Data Literate. The Data Literacy Skills Everyone Needs to Succeed*. Kogan Page, New York.

Mosteanu, N.R. (2019). International Financial Markets Face to Face with Artificial Intelligence and Digital Era, *Theoretical and Applied Economics*, 26(3), 620, 123-134.

Neubauer, R. Tarling, A. & Wade, M. (2017). Redefining Leadership for a Digital Age. https://www.imd.org/research-knowledge/reports/redefining-leadership/

Northouse, P.G (2013). *Leadership: Theory and Practice*, SAGE Publications.

Oberer, B., Erkollar, A. (2018). Leadership 4.0: Digital Leaders in the Age of Industry 4.0. *International Journal of Organizational Leadership*, 7(4), 404-412.

PricewaterhouseCoopers (PwC) (2018). Will Robots Steal Our Jobs? An International Analysis of the Potential Long-Term Impact of Automation. https://www.pwc.co.uk/economic-services/assets/international-impact-of-automation-feb-2018.pdf

Sahyaja, C., Rao, K.S.S. (2018). New Leadership in the Digital Era - a Conceptual Study on Emotional Dimensions in Relation with Intellectual Dimensions, *International Journal of Civil Engineering and Technology* (IJCIET), 9(1), 738–747.

Stogdill, R.M. (1974). *Handbook of leadership: A survey of the literature*. New York: Free Press.

Susskind, R. & Susskind, D. (2015). *The Future of the Professions. How Technology will Transform the Work of Human Experts*, Oxford University Press.

Vogelsang, M. (2010). *Digitalization in Open Economies, Contributions to Economics*, Physica-Verlag HD, Heidelberg.

West, D.M. (2015). *What happens if robots take the jobs? The impact of emerging technologies on employment and public policy*. Center for Technology Innovation at Brookings.

Wilson, E. (2004). Leadership in the Digital Age, in G. R. Goethals, G. J. Sorenson & J. M. Burns (Eds.), *Encyclopedia of leadership*, SAGE Publications, 1, 859-861.

World Bank (2019). The Changing Nature of Work, *World Development Report*. https://www.worldbank.org/en/publication/wdr2019

Yukl, G. (1989). Managerial Leadership: a Review of Theory and Research. *Journal of Management*, 15(2), 251-289.