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An Integrated Framework for Understanding Digital Work in Organizations

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Abstract

This paper presents an integrated framework for better understanding digital work in organizations. A systematic analysis of existing studies on digital work has been conducted from different perspectives. Such an analysis leads to the identification of the critical issues and emerging challenges to the adoption of digital work with the rapid development of information and communication technologies. To better tackle such issues and challenges, an integrated framework is proposed for better understanding digital work in organizations. Such a framework can further be tested and validated in various contexts for enhancing our knowledge in the adoption of digital work in modern organizations.

Keywords: Digital work, technology adoption, literature review, integrated framework

1 Introduction

Digital technologies have dramatically transformed the traditional workplace in organizations (Richter et al., 2018; Sahu et al., 2018a). Such technologies, including big data, artificial intelligence, cognitive computing, internet of things, cloud computing, mobile computing, social media, and digital platforms, have reshaped how work is designed, performed, and managed at individual, organizational, and societal levels (Sahu et al., 2018b; Ellder, 2019). Furthermore, increasing automation and augmentation of work with the application of artificial intelligence are transforming the labour market with human beings replaced by or working together with ever-smarter robots. This leads to the development of emerging digital work environments in which the work arrangement in organizations is becoming more contingent, flexible, and distributed (Nakrosiene et al., 2018).

With the rapid development of information and communication technologies (ICT), digital work is becoming increasingly popular. The popularity of digital work in organizations is due to its benefits including higher job satisfaction, increased autonomy, improved productivity, reduced work-family conflict, lower stress, and reduced commuting time and costs (Solis 2017; Nakrosiene et al., 2018; Zhang et al., 2020). The potential of digital work for improving the performance of workers and organizations attracts many interests evidenced by the increasing number of publications (Howarth et al., 2018; Madakam, 2019).

Much research has been done for better understanding digital work in organizations. Such research has covered diverse areas including information systems, management, computer science and health. Information systems-oriented research looks at the adoption of digital technologies (Schwarzmuller et al., 2018), security (Park et al., 2018; Hicks, 2019), information acquisition, privacy and trust (Brown et al., 2019; Grant et al., 2019) in digital work. Management-based research focuses on leadership (Mayo et al., 2015), flexible work arrangement (Bathini and Kandathil, 2019), communication (Bordi et al., 2018), job effectiveness (Solis, 2017), autonomy and control (Bader and Kaiser, 2017) in digital work. Computer science destined research explores the development of effective algorithms for facilitating the automation process in digital work (Madakam et al., 2019). Health based research investigates the use of digital technologies for better health-related outcomes in digital work (Howarth et al., 2018). Such research has provided various insights on digital work in organizations from different perspectives.

Existing research provides rich information on particular aspects of digital work under various circumstances. There is, however, lack of systematic studies of such a multi-disciplinary phenomenon in the literature. With the increasing popularity of digital work in organizations, a systemaic review of the related literature on digital work can inform research in the domain. As a result, two research questions are developed for better understanding digital work in organizations as follows:

- *What are the emerging issues and challenges in digital work?*
- *How can these emerging issues and challenges be adequately addressed?*

To address the research questions above, a systematic review of the related literature in digital work is conducted. A total of 62 papers published between 2015 and 2020 are synthesised to identify the themes in digital work. This results in the formulation of a working definition for digital work and the identification of the emerging issues and challenges to the adoption of digital work in organizations. To better tackle such issues and challenges, an integrated framework is proposed which can further be tested and validated for enhancing the knowledge in the adoption of digital work in organizations.

In what follows, Section 2 presents the methods this study uses. Section 3 presents an overview of the development of digital work in organizations. Section 4 summarizes the emerging issues and challenges for adopting digital work in organizations. This leads to the development of an integrated framework for adopting digital work in organizations in Section 5. Finally, Section 6 concludes the paper.

2 Method

Conducting reviews of a specific paradigm is an established form of enquiry in research. Such reviews are suitable for creating a consolidate foundation for advancing knowledge and theory development (Vial, 2019). This research aims to explore the development of digital work in organizations from existing research over recent years to guide future research in this area.

To adequately achieve the aim of this study, the guideline of Wolfswinkel et al. (2013) is followed for conducting the systematic review of the literature. This means that five stages including (a) defining the scope of the review, (b) searching the literature, (c) selecting the final sample, (d) analysing the corpus, and (e) presenting the findings, have been adopted in the study.

Defining the scope of the review entails the definition of specific criteria for the inclusion and exclusion of relevant sources and the criteria for identifying and retrieving those sources in the literature. In this study, four prominent databases are used to source literature including ProQuest, Emerald, ScienceDirect and Web of Science. The selection of these databases is due to their representativeness and coverage in the publication of top academic papers in digital work in organizations.

To ensure broad coverage of the studies in these databases, several keywords have been used for the search include '*digital workplace*', '*digital work*', '*telework*', '*e-workplace*', '*e-work*', and '*e-working*'. To select the most relevant studies, several criteria are used to set the limitation, including restricting the document type to scholarly journals, the language in English, and the publish time from 2015 to 2020. Conference papers, book chapters, and reports are excluded. Only refereed journal articles have been selected as they represent the state-of-the-art research outputs with high impact (Wolfswinkel et al. 2013). This approach is consistent with previous literature reviews (Vial, 2019).

The second phase is to run the search query within the selected databases for retrieving the search results. A total of 688 articles are returned using the above pre-defined search strings. This initial search enables us to gain a general understanding of the coverage of digital work topics in various disciplines including information systems, management, computer sciences, and health.

The third phase involves selecting the final samples for detailed analysis. The search is limited to the title and the abstract to focus on the search results. The titles and abstracts of all initially identified articles are screened for checking the relevance to digital work. This leads to the identification of 89 relevant articles. Duplicate articles are removed. This left a total of 62 articles for further review.

The identified 62 articles have been read in full for coding and analysis. Figure 1 presents an overview of the distribution of the selected papers in terms of the year of publication. It shows that there is an increased interest in digital work from 2015 to 2019.

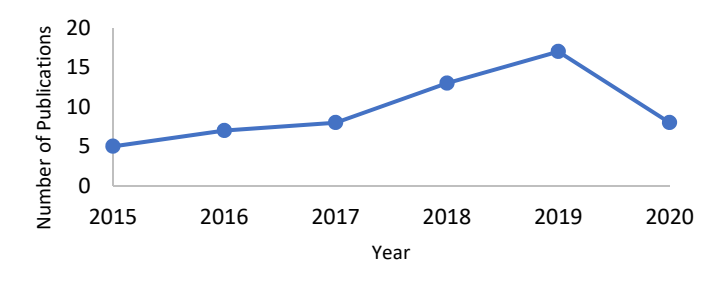

Figure 1: Distribution of the articles by the year of publication

The research method these articles have adopted is examined. Some common methods including quantitative, qualitative, and mixed methods have been adopted in these articles. Most studies adopt a quantitative method with 27 articles. Survey is the most used data collection approach (n = 24), followed by modelling (n = 2), and simulation (n = 1). Interviews (n = 8) and case studies (n = 3) are the most applied approach within the qualitative method. The mixed-method studies (n = 6) apply survey along with several qualitative approaches. Five studies use document review in their studies.

To better understand the emerging themes in digital work, NVivo 12.0 is used to generate a word cloud for providing an overview of the general topics from all the abstracts of the included papers. Figure 2 shows the word clouds of the frequently occurring words. The size of the word is directly correlated with its frequency of use. The most occurring words include 'telework', 'digital', 'employees', 'control' and 'information'. This shows that these are the areas that generate the most interest in the reviewed papers.

3 Overview of digital work

Digital work originates from the concept of telework in the 1970s in response to the oil crisis (Pyoria, 2011). The idea is that telework can be a means to avoid commuting to offices, therefore helping to reduce the dependence on fossil fuel. Digital work has evolved over three generations. The first generation is called the Home Office. This is based on the use of personal computers and fixed telephones to replace long commuting hours between home and office. The second generation is called Mobile Office which includes laptop computers and mobile phones enabled wireless, portable work from locations other than home or the office, accompanied by a fast-growing dispersion of the Internet and the World Wide Web. The third generation, the Virtual Office, is whereby online connections via

radio links and the development of ICTs such as smartphones and tablet computers enable the mobile, virtual connection of workers from almost anywhere and at any time (Messeger and Gschwind 2016).

Figure 2: Word clouds of the frequently occurring words in the abstracts

Digital work is a broad and complex concept that lacks a commonly accepted definition. Different terms have been used to describe this multifaceted phenomenon including digital workplace, teleworking, telecommuting, e-working, remote working, and agile working (Pyoria, 2011). Among these interchangeable terms, telework has been used most often.

Table 1 presents an overview of various definitions of digital work in the literature. An examination of these definitions shows that there are several common themes in approaching digital work. These common themes include the use of technology, remote locations, contractual arrangements between employers and employees, and flexible working time. This leads to the working definition of digital work in this study as a *'work arrangement between employees and the organization for performing job-related tasks using information and communication technologies from a remote location.'*

Dimension	Description	Sources
use of technology	collaborative work practices that are being reconfigured via technologies	Orlikowski (2016); Scavarda et al. (2017)
contractual arrangements	distributed work arrangements between employees and the organization	Bader and Kaiser (2017)
contractual arrangements, remote locations	work arrangements from an approved worksite other than the location from which the employee would otherwise work	U.S. Office of Personnel Management (2013)
use of technology, remote locations	work practices undertaken outside the office using ICT	Perez et al. (2003); Arvola (2006); Schwarzmuller (2018); Kaplan et al. (2018); Nakrosiene et al. (2018); Grant et al. (2019)
use of technology, contractual arrangements, remote locations	work arrangement between employees and organizations from remote locations using ICT	Myao et al. (2015); Cortes-Perez et al. (2020)
use of technology, flexible working time, remote locations	flexible work arrangement in which work is conducted from remote locations using ICT	Park (2018); Loo and Wang (2018; Galvez et al. (2020)

Table 1. An overview of the definitions of digital work

There are several advantages of digital work along with its characteristics. The benefits of using digital technologies for work at remote locations, for example, include improved productivity (Bathini and

Kandathil, 2019), increased autonomy (Bader and Kaiser, 2017), reduced commuting time (Solis, 2017), reduced travel and other costs (Madakam et al., 2019), and reduced traffic congestion and air pollution (Nakrosiene et al., 2018). The benefits of flexible contractual arrangements between the employer and employee include time planning freedom (Nakrosiene et al., 2018; Bathini and Kandathil, 2019), lower stress (Mayo et al., 2015), increased job satisfaction (Grant et al., 2019), increased employment opportunities for women with children, students and disabled persons (Ellder, 2020). Table 2 shows the benefits of digital work from individual, organizational, and societal perspectives.

Level	Benefits	Sources
Individual	• Increased job satisfaction • Increased productivity • Increased work autonomy • Increased work-life balance • Reduced travel time • Reduced costs (travel, clothing, rent, etc) • Less involvement in office politics • Spatial mobility	Bader and Kaiser, 2017; Solis, 2017; Nakrosiene et al., 2018; Bathini and Kandathil, 2019; Grant et al., 2019; Madakam et al., 2019; Ellder, 2020
Organizational	• Increased productivity • Increased employee retention • Improved agility • Reduced costs (rent, office space, equipment, etc) • Reduced absenteeism	Mayo et al., 2015; Nakrosiene et al., 2018; Schwarzmuller et al., 2018; Bathini and Kandathil, 2019
Societal	• Less traffic • Less pollution • Increased local and rural community support	Pyoria et al., 2011; Nakrosiene et al., 2018; Richter et al., 2018

Table 2. Benefits of digital work

Digital work involves multi-disciplinary research. Table 3 shows the emerging themes in various disciplines. Existing research for better understanding digital work and its implications in organizations covers four discipline areas including information systems, management, computer science and health.

Discipline	Themes	Source
Information Systems (n = 14)	• adoption of digital technologies • security • trust • information acquisition • digital privacy	Dubbelt and Oostrom, 2015; Kollar and Poor, 2016; Ghani et al., 2018; Schwarzmuller et al., 2018; Park et al., 2018; Brown et al., 2019; Hicks, 2019; Grant et al., 2019
Management (n = 47)	• worklife balance • leadership • flexible work arrangement • communication • job effectiveness • autonomy and control • gender equity • task design • Social sustainability	Mayo et al., 2015; Soli et al., 2016; Bader and Kaiser, 2017; Bordi et al., 2018 Bathini and Kandathil, 2019
Computer Science (n = 4)	• process automation • digital work simulation	Dubbelt et al., 2015; Madakam et al., 2019
Health (n = 2)	• wellbeing • health intervention	Howarth et al., 2018; Huber and Gartner, 2018

Table 3. Emerging themes in different disciplines

4 Emerging issues

To explore the emerging issues in digital work, four themes identified in the previous section are used to guide the analysis of the literature. These themes include the use of technology, remote locations, contractual arrangements between the employer and employee, and flexible working time.

Use of technology

Digital work is undergoing an evolutionary process in which digital technologies are the main enabler (Sahu et al., 2018a; Chong and Duan, 2020). Personal computers and telephones initiate the relocation of the traditional work away from the employer's offices either into or closer to employees' homes (Pyoria, 2011). With the advancement of mobile devices like laptops and mobile phones, workplaces extend to places like trains, subways and cafes. The dispersion of Internet access then virtualizes work and makes it accessible on smaller and more powerful devices like smartphones and tablet computers. Such developments start to acknowledge mobility as an additional important dimension of digital work (Mayo et al., 2015).

There is an increasing use of digital technologies in organizations. Such technologies include business analytics (Bader and Kaiser, 2017), instant messaging, email, social media, and bulletin boards (Bordi, 2018), social network (Cortini and Fantinelli, 2018), cloud computing technology (Park, 2018), disruptive technologies including mobile computing and virtual reality, sensors embedded in wearable devices and machines, telepresence systems (Schwarzmuller, 2018), robotic process automation (Madakam, 2019), new mobile online technologies, virtual offices, and smart devices (Thulin et al., 2019), Skype (Meske and Junglas, 2020), and artificial intelligence (Rani and Furrer, 2020).

The rapid development of ICT makes digital work attractive for organizations. There are, however, two issues associated with the use of technologies for digital work. One being usually heavily dependent on technologies for conducting their work, workers may be challenged by having to face technical problems on their own (Richter et al., 2018). The other is to do with the security. As more information is being shared online in digital work, organizations are more at risk of having their data hacked or accidentally leaked (Park et al., 2018).

Remote location

One characteristic of digital work is remote location. Remote location includes satellite offices, neighbour work centres, mobile work, and home-based work. Among which home-based work is the most common way of digital work (Bathini and Kandathil, 2017).

Technologies enable the scope for work to be released from traditional locations (Irani, 2015). Most digital work does not have to be performed from a fixed setting because it can be undertaken from a variety of sites with the use of ICT (Fried and Hannson, 2013). Whilst such changes offer greater temporal and locational flexibilities for digital work, there is a growing concern due to the reduced physical presence of employees in organizations.

The reduced physical presence of employees can be a source of social isolation which limit the potential for socializing with colleagues and impedes the ability to build strong social and informal ties with colleagues (Huber and Gartner, 2018). The limited engagement with colleagues may have a negative effect on career progression as employees have less opportunity to network and assess their performance against their colleagues. In addition, the lack of face-to-face communication may also inhibit the ability to develop trust between employees and their co-workers and managers (Bader and Kaiser, 2017). Furthermore, such technologically embedded new ways of working necessitate reconstitution of organization control modes (Bader and Kaiser, 2017). Working in remote location involves reconstitution of the traditional organization controls since spatial separation from managers and peers reduces workers' physical visibility (Huber and Gartner, 2018). The lack of visibility makes the exercise of behaviour-based control more difficult.

Working in remote locations also leads to an increased blurring of the boundary between work and private life (Thulin et al., 2019). As these two become less separated, digital work can increase the potential for conflict, stress and even health problems (Howarth et al., 2018). Moreover, employees may be more subject to interruptions when working remotely (Richter et al., 2018).

Contractual arrangements

Even though digital work provides opportunities for employees to work from home, careful considerations must be taken in regards to the issue of contractual arrangements. This is because the absence of an established contractual framework and arrangements in digital work contributes to the

slow diffusion of digital work (Bertil and Eva, 2016). This issue concerning contractual arrangements between employer and employee is further complicated due to the formal and informal arrangements. Offten, only formal digital work based on contractual agreements between employers and employees is considered to be an appropriate working arrangement. Informal digital work whereby informal arrangements are made between employers and employees has not received due consideration. This is because this type of working arrangement is not normally covered in the labour contract.

Much of the digital work today is still conducted largely on informal working arrangement even though this type of arrangement is undesirable (Aguilera et al., 2016). Both employers and employees are usually agreeable on an informal working arrangement. This is because the implementation of formal working arrangement involves high transaction costs including (a) change of employment contracts, (b) provision of business equipment, (c) converting a homeroom into a working area and (d) imposing work schedules (Bertil and Eva, 2016). As a result, the informal working arrangement is the preferred option as this arrangement can redcuce the high transaction costs while benefiting from flexible digital work.

Flexible working hours

Another important characteristic of digital work is flexible working hours. The flexible working hours provide employees with the freedom to make decisions regarding how, where, when and with whom to engage in work-related tasks (Richter et al., 2018). This ability in deciding how and when to work has a substantial impact on employees' perceptions and their engagement with their job, team, supervisor and organization. The practice of flexible working hours positively affect organization performance by (a) reducing absenteeism and employee turnover, (b) reducing operating costs and (c) improving productivity. Meanwhile, such arrangements enable employees to align their work with their private life which can lead to a better work-life balance (Kelliher and Anderson, 2010). Maintaining this work-life balance is of critical importance to employee's health and well-being.

Digital work may also have negative effects on employees as it can lead to work intensification and poor work-life balance. Work intensification is concerned with the increasing amount of effort whereby an employee must invest during the working day that often results from increased economic pressure and other societal changes (Green, 2004). This work intensification which is driven by frequent work interruptions, long working hours, lack of recovery time, and the demand to work during one's free time can lead to occupational stress (Galvez et al., 2012). This is also supported by Brown et al. (2019) who claim that work intensification limits employee involvement in continuous improvement, and plays a crucial role in enabling employees to experience higher personal efficacy, better work performance and higher employee satisfaction. The other issue is concerned with poor work-life balance. Williams et al. (2013) point out that flexible working-time arrangements might threaten the boundaries between home and work life, which can cause work-to-home spill-over. For example, an employee has to reduce day-to-day parenting responsibilities and spend more time to fulfil work responsibilities at home.

5 A Framework

This section proposes an integrated framework for addressing the critical issues and the emerging challenges in the adoption of digital work in organizations. This framework builds on four themes that have emerged through our analysis including the use of technology, remote locations, contractual arrangements between the employer and employee, and flexible working time.

Use of technology

Two main issues identified from the use of technology for digital work include workers having to face technical problems and security issues. To address the technical problems when employees face in digital work, some of the frequently mentioned strategies include having the latest technologies to ensure ease of access to network servers (Boell et al., 2013), providing essential training for preparing employees with the updated knowledge about technologies (Dittes et al., 2019), and providing real-time IT support (Grant et al., 2019).

To avoid the legal and reputational damages that security breaches can cause, organizations should set up the proper protocols to protect themselves from security breaches. More specifically, HR departments need to become key stewards of data security and ensure training is provided to all levels of employees on how to access, label and share data (Hicks, 2019).

Remote location

Two main issues identified from working in a remote location for digital work include the lack of physical contact and the organization control. To address these issues, frequent communication with

coworkers and managers as to the work progress is needed (Schwarzmuller et al., 2018). By answering emails and telephones calls immediately, employees are able to show that they are indeed working and are continually connected. Also, by being accessible, employees may alleviate their managers' concerns about compromised communication. Other strategies include preparing a dedicated work area, having a set work schedule, planning work tasks, communicating with family about needing to work without interruptions, and having outside childcare (Dittes et al., 2019).

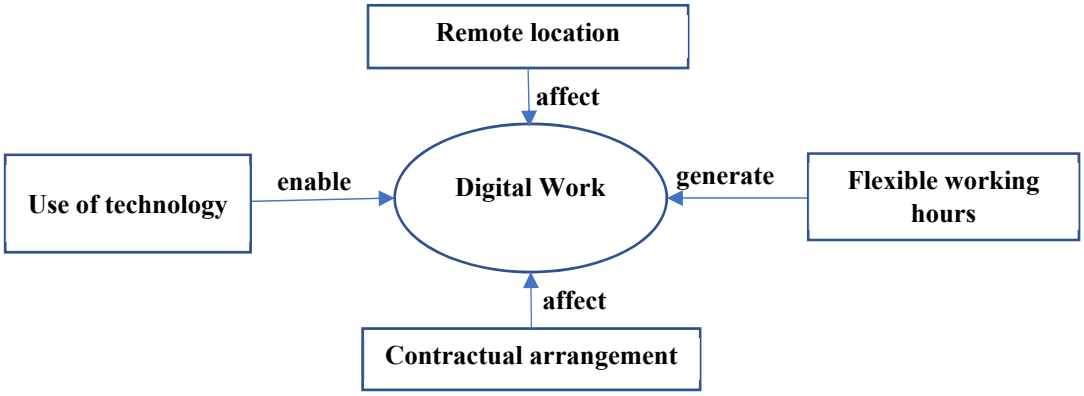

Figure 3: A digital work framework

Further, digital work challenges managers and their traditional perception of leadership styles as they lose direct control over checking how effective employees work (Richter et al., 2018). A change in the leadership style when managing digital work is needed. Strategies could include that managers move away from the instruction-based management and towards the management by objective (Boell et al., 2013). Further, managers with emergent, concentrated, and shared leadership styles would result in a more productive and successful team in digital work (Hoch and Dulebohn, 2017).

Contractual arrangement

One issue is identified with regards to the contractual agreement in digital work. To address this issue, specific agreements must be in place to define the rights and duties of both employees and employers. This is to ensure that both the employer and the employee have a clear, shared understanding of the employee's digital work arrangement. For example, employers must not use digital work as an excuse to get employees to do unpaid overtime or employees cannot be expected to be on call 24 hours a day.

Further, it is also important that both employer and employee are fully aware of labour legislation and key areas of occupational health and social interaction in the workplace community. Distributed work has the best prospects of success if all the people involved know what to expect and are prepared to deal with any problems associated with the new work culture (Helle, 2006). It is also crucial that employees and employers agree upon the rules of digital work in writing to ensure that these comply with national labour legislation (Bertil and Eva, 2016). In addition, these employees should have the same status and enjoy the same working conditions as other employees in equivalent jobs.

It is observed that formal work agreement remains undesirable for most employers due to the existence of a legal formalization (Bertil and Eva, 2016). Thus, informal work arrangement will still be a popular option for both employers and employees. To increase the employees' participation in formal work arrangement, public authorities need to introduce stronger policies which include transferring the social costs such as fuel taxes, transport taxes and urban toll systems generated by urban congestion onto the employees.

Flexible working hours

There are two issues identified in relation to flexible working hours in digital work, which include work intensification and work-life balance. To deal with work intensification issue, it is important that both managers and employees discuss their expectations through clear communications, including setting boundaries and managing expectations. For example, employees need to clearly establish how they will work with their colleagues and their manager to maintain work productivity. In addition, managers need to follow formal organizational policy and implement consistent practices across team members (Koivisto and Rice, 2016).

To deal with the work-life balance issue, organizations need to develop a balanced culture and set their objectives more realistically. This strategy is supported by Galvez et al. (2012) who believe the impact that digital work can have on the daily life of employees depends to a very large extent on the organizational culture. In addition to that, organizations need to provide greater autonomy to employees so that they can organize their tasks, time, and workspace effectively. Brown et al. (2019) point out that greater autonomy to choose when to work seems to help employees balance work and life even if they work long hours. On top of that, employees should be evaluated based on their results, and not on the number of hours they spend on their computer.

This study contributes to the existing research from both theoretical and practical perspectives. Theoretically, this study reviews the recent digital work research and identifies critical issues and emerging challenges to the adoption of digital work with the rapid development of ICT. Such a review advances the knowledge of digital work and serves as the basis of future research on the adoption of digital work in modern organizations. The proposed framework for addressing the critical issues and the emerging challenges can be tested and validated in various contexts for enhancing our knowledge in the adoption of digital work in organizations.

Practically, this study provides organizations with practical recommendations on how to address critical issues and emerging challenges in digital work, leading to the effective management of digital work. Such a study would be of practical significance for the development of appropriate strategies and policies toward the building and improvement of digital work in organizations.

6 Conclusion

This paper presents a systematic review of 62 papers published between 2015 and 2020 in digital work, leading to identifying the emerging themes. This results in the formulation of a working definition of digital work and the identification of the emerging issues and challenges to the adoption of digital work in organizations. To better tackle such issues and challenges, this paper proposes an integrated framework for better understanding digital work in organizations. Such a framework can further be tested and validated for enhancing our knowledge in the adoption of digital work in organizations.

7 References

Aguilera, A., Lethiais, V., Rallet, A., and Proulhac, L. 2016. "Home-based telework in France: Characteristics, barriers and perspectives," *Transportation Research Part A* (92), pp. 1-11.

Arvola, R., Tint, P., Kristjuhan, U., and Siirak, V. 2017. "Impact of telework on the perceived work environment of older workers," *Scientific Annals of Economics and Business* (64:2), pp. 199-214.

Bader, V., and Kaiser, S. 2017. "Autonomy and control? How heterogeneous sociomaterial assemblages explain paradoxical rationalities in the digital workplace," *Management Revue* (28:3), pp. 338-358.

Bathini, D. R., and Kandathil, G. M. 2019. "An orchestrated negotiated exchange: Trading home-based telework for intensified work," *Journal of Business Ethics* (154:2), pp. 411-423.

Bertil, V., and Eva , T. 2016. "Who and where are the flexible workers? Exploring the current diffusion of telework in Sweden," *New Technology, Work and Employment* (31:1), pp.77-96.

Boell, S. K., Campbell, J., Cecez-Kecmanovic, D., and Cheng, J. E. 2013. "The transformative nature of telework: A review of the literature," *Proceedings of the Nineteenth Americas Conference on Information Systems*, Chicago, Illinois.

Bordi, L., Okkonen, J., Mäkiniemi, J. P., and Heikkilä-Tammi, K. 2018. "Communication in the digital work environment: implications for wellbeing at work," *Nordic Journal of Working Life Studie*s (8), pp. 29-49.

Brown, H., Kim, J. S., and Faerman, S. R. 2019. "The influence of societal and organizational culture on the use of work-life balance programs: A comparative analysis of the United States and the Republic of Korea," *The Social Science Journal* (4), pp. 12-21.

Chong, J., and Duan, S. (2020). Understanding Digital Strategy for Digital Transformation: A Review of Literature. *Pacific Asia Conference on Information Systems* (p. 201).

Cortes-Perez, H. D., Escobar-Sierra, M., and Galindo-Monsalve, R. 2020. "Influence of lifestyle and cultural traits on the willingness to telework: A case study in the Aburrá Valley, Medellín, Colombia," *Global Business Review*.

Cortini, M., and Fantinelli, S. 2018. "Fear for doocing and digital privacy in the workplace: a dual pathway model," *Management Revue* (29:2), pp. 162-178.

Dittes, S., Richter, S., Richter, A., and Smolnik, S. 2019. "Toward the workplace of the future: How organizations can facilitate digital work," *Business Horizons* (62:5), pp. 649-661.

Dubbelt, L., Oostrom, J. K., Hiemstra, A. M., and Modderman, J. P. 2015. "Validation of a digital work simulation to assess Machiavellianism and compliant behavior," *Journal of Business Ethics* (130:3), pp. 619-637.

Ellder, E. 2019. "Who is eligible for telework? Exploring the fast-growing acceptance of and ability to telework in Sweden, 2005–2006 to 2011–2014," *Social Science*s (8:7), p. 200.

Galvez, A., Martinez, M., and Perez, C. 2012. "Telework and work-life balance: Some dimensions for organisational change," *Journal of Workplace Rights* (16), pp. 273-297.

Ghani, F. A., Muslim, N. A., Rasli, M. A. M., Bhaskaran, K. N. A., Rashid, R. E., and Kadir, S. A. S. A. 2018. "Problematic usage of digital technologies at workplace: a study on job stress and cyberloafing behaviour among government servants in Malaysia," *Global Business and Management Research*, 10(3), pp. 12-23.

Grant, C. A., Wallace, L. M., Spurgeon, P. C., Tramontano, C., and Charalampous, M. 2019. "Construction and initial validation of the e-work life scale to measure remote e-working," *Employee Relations* (41:1), pp. 16-33.

Green, F. 2004. "Why has work effort become more intense?" *Industrial Relations* (43), pp. 709-741.

Helle, M. 2006. "New forms of work in labour law", in Andriessen, J.H.E. and Vartiainen, M. (Eds), Mobile Virtual Work. A New Paradigm?, Springer, Berlin, pp. 71-94.

Hicks, M. 2019. "Why the urgency of digital transformation is hurting the digital workplace," *Strategic HR Review* (18:1), pp. 34-35.

Howarth, A., Quesada, J., Silva, J., Judycki, S., and Mills, P. R. 2018. "The impact of digital health interventions on health-related outcomes in the workplace: a systematic review," *Digital Health* (4), pp. 1-18.

Hoch, J. E., and Dulebohn, J. H. 2017. "Team personality composition, emergent leadership and shared leadership in virtual teams: a theoretical framework," *Human Resource Management Review* (27:4), pp. 678-693.

Huber, C., and Gartner, C. 2018. "Digital transformations in healthcare professionals' work: dynamics of autonomy, control and accountability," *Management Revue* (29:2), pp. 139-161.

Kaplan, S., Engelsted, L., Lei, X., and Lockwood, K. 2018. "Unpackaging manager mistrust in allowing telework: comparing and integrating theoretical perspectives," *Journal of Business and Psychology* (33:3), pp. 365-382.

Kelliher, C., and Anderson, D. 2010. "Doing more with less? Flexible working practices and the intensification of work," *Human Relations* (63:1), pp. 83-106.

Koivisto, S., and Rice, R.E. 2016. "Leader prototypicality moderates the relation between access to flexible work options and employee feelings of respect and leader endorsement," *International Journal of Human Resource Management* (27,) pp. 2771-2789.

Kollar, C., and Poor, J. 2016. "Organisations in digital age–information security aspects of digital workplaces," *Management, Enterprise and Benchmarking in the 21st Century*, 73-82.

Loo, B. P., and Wang, B. 2018. "Factors associated with home-based e-working and e-shopping in Nanjing, China," *Transportation* (45:2), pp. 365-384.

Madakam, S., Holmukhe, R. M., and Jaiswal, D. K. 2019. "The future digital work force: Robotic process automation (RPA)," *Journal of Information Systems and Technology Management* (16), pp. 1-7.

Mayo, M., Gomez-Mejia, L., Firfiray, S., Berrone, P., and Villena, V. H. 2016. "Leader beliefs and CSR for employees: the case of telework provision," *Leadership and Organization Development Journal* (37:5), pp. 609-634.

Meske, C., and Junglas, I. 2020. "Investigating the elicitation of employees' support towards digital workplace transformation," *Behaviour and Information Technology* (39:4), pp. 1-17.

Nakrosiene, A., Buciuniene, I., and Gostautaite, B. 2019. "Working from home: characteristics and outcomes of telework," *International Journal of Manpower* (40:1), pp. 87-101.

Rani, U., and Furrer, M. 2020. "Digital labour platforms and new forms of flexible work in developing countries: Algorithmic management of work and workers," *Competition and Chang*e (7), pp. 1-10.

Park, S., Kim, Y., Park, G., Na, O., and Chang, H. 2018. "Research on digital forensic readiness design in a cloud computing-based smart work environment," *Sustainability* (10:4), 1203.

Pyoria, P. 2011. "Managing telework: risks, fears and rules," *Management Research Review* (34:4), pp. 386-399.

Richter, A., Heinrich, P., Stocker, A., and Schwabe, G. 2018. "Digital work design," *Business and Information Systems Engineering* (60:3), pp. 259-264.

Sahu, N., Deng, H., and Mollah, A. 2018a. "Investigating the critical success factors of digital transformation for improving customer experience," *Proceedings of the International Conference on Information Resources Management*, Lingpo, China.

Sahu, N., Deng, H., and Mollah, A. 2018b. "A capability based framework for customer experience focused digital transformation," *Proceedings of the Australian Conference on Information Systems*, Sydney, Australia.

Scavarda, M., Levalle, R. R., Lee, S., and Nof, S. Y. 2017. "Collaborative e-work parallelism in supply decisions networks: the chemical dimension," *Journal of Intelligent Manufacturing* (28:6), pp. 1337-1355.

Schwarzmuller, T., Brosi, P., Duman, D., and Welpe, I. M. 2018. "How does the digital transformation affect organizations? Key themes of change in work design and leadership," *Management Revue* (29:2), pp. 114-138.

Solis, M. (2017). Moderators of telework effects on the work-family conflict and on worker performance. European Journal of Management and Business Economics.

Thulin, E., Vilhelmson, B., and Johansson, M. 2019. "New telework, time pressure, and time use control in everyday life," *Sustainability* (11:11), 3067.

Vial, G. 2019. "Understanding digital transformation: a review and a research agenda," *The Journal of Strategic Information Systems* (28:2), pp. 118-144.

Williams, J. C., Blair-Loy, M., and Berdahl, J. L. 2013. "Cultural schemas, social class, and the flexibility stigma," *Journal of Social Issues* (69:2), pp. 209-234.

Wolfswinkel, J. F., Furtmueller, E., and Wilderom, C. P. 2013. "Using grounded theory as a method for rigorously reviewing literature," *European Journal of Information Systems* (22:1), pp. 45-55.

Zhang, Y., Zhu, J., Xu, N., Duan, S. X., & Huang, X. (2020). Optimal selection of expatriates for cross-border assignment to enhance manufacturing efficiency. *International Journal of Production Economics*, 107926.