

# Aligning the Strategies for the Public University Workforce's WFH Performance during the Coronavirus Crisis

Gy R. Hashim <sup>1</sup>, Alfina Bakar <sup>2</sup>, Adlin Na'qiah Sabar <sup>2</sup>, Hanim Azura Mahiyuddin <sup>2</sup>

<sup>1</sup> Faculty of Business & Management, <sup>2</sup> Administration & Human Resource Division  
Universiti Teknologi MARA Cawangan Selangor, Puncak Alam, Selangor, Malaysia

guy73106@yahoo.com, alfina@uitm.edu.my, naqiah@uitm.edu.my, hanim946@uitm.edu.my  
Tel: 0133852288

## Abstract

The coronavirus (Covid-19) crisis required the workforce to work from home (WFH) during the lockdowns. Aligning the staff for work-from-home (WFH) schedules requires proper human resource planning for employee satisfaction and continued organizational performance. The paper provides empirical evidence on an institutional study on employee satisfaction and performance while working from home. Also, other variables on ICT usage and internet accessibility formed the foundations for further discussions on workforce alignment. Recommendations on the viability of WFH after the pandemic crisis will be described.

Keywords: telework; digital and agile workforce; work performance; digital government

*eISSN 2514-751X ©2021. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., UK. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>). Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians, Africans, Arabians), and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.*

DOI: <https://doi.org/10.21834/ajebs.v6i20.394>

## **1.0 Introduction**

Remote work or telework is a flexible work arrangement for both the public and private sectors (Renard et al., 2021). When the movement control orders (MCO) were mandated due to the coronavirus pandemic, all walks of life were homebound. For the workforce, the unprecedented situation from the Covid-19 outbreak required all employees to work from home (WFH), with many caught unprepared for the sudden workplace changes, that is, without the infrastructure and systems in place (Shipman et al., 2021). During the lockdown periods lasting more than a year, the organizations' management and administrators scrambled to ensure work continued from home.

Both the white and blue-collar occupations have to adjust to working from home. For the former, their regular desks and workstations have to be replaced with a semblance of office space at home. For the latter, adjustments had to be made to show their productivity. For the latter, this is difficult as their job requires physical or hard manual labor and being outdoors. To ensure work continuity at home, the workforce had to incorporate computers and the Internet into their work practices and communication with their superiors (Kahn & Burrell, 2021).

The COVID-19 pandemic showed that the workforce is ready for the continuity of working from home. Before the pandemic, telework or WFH for civil servants was not favored because of trust issues by the federal government (Brown et al., 2016). But when the pandemic struck, hasty decisions were drawn to align organizational goals and the WFH policy and supervise the employees' productivity, performance (Kim et al., 2021), and well-being (Lecours et al., 2021). Hence, this paper provides the human resource alignment strategies used by Universiti Teknologi MARA Cawangan Selangor to ensure that employees working from home achieve significant productivity and performance.

While waiting to move to the endemic era after the COVID-19 pandemic, continuity of working from home should be telecommuting for white-collar occupations. Still, the employees should be physically present at the office according to the superiors' schedules from time to time. In other words, hybrid work schedules should be implemented as not all occupations can be completed at home, for job scopes in the facilities department that require the upkeep of the campus. To reiterate, the effects on essential employee determinants or outcomes such as work productivity, job performance, and satisfaction (Mihalca et al., 2021). These determinants were investigated for this study.

## **2.0 Literature Review**

### **2.1 About Telework or Work-From-Home (WFH)**

The unprecedented situation from the Covid-19 outbreak required the workforce to work from home (WFH) during the lockdown periods. Most of today's work productivity involves using information and communication technologies (ICT), where the Internet has become the backbone for telework. Never has the Internet become such a crucial, more comprehensive network than when the pandemic struck, and everyone homebound had to

rely on cyberspace for education, business, socializing, and others. The waves of COVID-19 have significantly impacted internet traffic (Feldmann et al., 2021).

To clear the air on the definitions from the terms that were interchangeably used, telework, work-from-home, or remote work means the same; it is a flexible work arrangement that allows an employee to from remote location outside of the corporate offices or offsite (Glossary, 2021). Remote work is again not a new way of ensuring the continuity of work. In the case of remote work, employees caught in the pandemic lockdowns and away from home had to resort to working remotely. For example, some Malaysian employees were out of state visiting their parents or any other matters, and when the government mandated the lockdown, they had to stay put. Nobody was allowed on the roads in the early days of the lockdown, yet these employees had to show productivity by working from wherever they were.

Consequently, the use of computers and the Internet has been exponential during the lockdown, but some were caught unaware by the enforced remote work (Zhang et al., 2021). The internet-enabled work was both pursued by both the students and the white-collar occupations. That said, not all employees are equipped with adequate digital skills and literacy. On a positive note, the pandemic lockdown resulted in digital heuristics (McGrew, 2021). Their inadequacies cornered employees who were reluctant to use computers or refused digital literacy training.

For Universiti Teknologi MARA Cawangan Selangor (UCS), the abrupt shift of staff working from home because of the pandemic lockdowns requires immediate action plans from the university administrators, presenting new leadership challenges (Liebermann et al., 2021). As noted by Lievermann et al. (2021), the change in the public sector work environment, from office to the home office, resulted in the possibilities and difficulties of leading transformational leadership in adapting the work process, including communicative problems. One alignment strategy is for employees in the administrative departments to be reskilled and upskilled in information and communication technologies (ICT). In other words, the COVID-19 pandemic was a game-changer for public administration and leadership which required robust governance responses to turbulent problems (Ansell et al., 2021). As for the human resource department of Universiti Teknologi MARA Cawangan Selangor (UCS), similar problems in ensuring employee adjustment and well-being while working from home remained prevalent. Organizations must stay alert and adaptive to unforeseen events and external crises that increase the UCS workforce's uncertainty. These uncertainties challenged the human resource managers to navigate the unprecedented issues and find new solutions to problems arising in operations management (Carnevale & Hatak, 2020).

## **2.2 The Agile, Digital Workforce in the Endemic Era**

To ensure compliance with the work-from-home policy, the UCS employees' discharge of their job responsibilities depended on their e-literacy. Also, employees should ensure that they have the necessary ICT equipment to work from home. The much-awaited endemic era calls for a digital workforce. The white-collar employees' skills are measured by their

digital competencies (Siddoo et al., 2019). It is encouraged that the employees continuously attend training programs to improve their capabilities for the career path. Nonetheless, the digitally competent workforce will progress much faster (Murawski & Bick, 2017) than those that do not jump on the d-bandwagon.

Hence, in aligning to the strategy of the digital workforce in tandem with the Industry Revolution 4.0 and the digital age (ibid), the UCS staff have to be reskilled and upskilled. This strategy should be mandated. The next cohort of the digital workforce, the university students, should also be prepared to meet the industry needs by having the necessary ICT skills. The current set of employees should change their attitude and mindsets by being agile and practice life-long learning.

At UCS, the human resource department has put into place the need for an agile working environment. This attitude is vital as not all administrative staff can achieve productivity and performance while homebound because of the lack of ICT peripherals. When the schedule calls for the staff's physical presence at the office, agility is akin to quality work production. Raut et al. (2021) noted that during the pandemic lockdowns, the agile workforce would better manage the crisis, particularly in government organizations. Further elaboration on the importance of having quality employees, workforce agility is a management strategy that fulfills the client charter by responding quickly and effectively to any crisis. As similarly pointed out by Murawski and Bick (2017), the practical implications of an agile, digital workforce blankets the multiple stakeholders and put UCS above the ranks of other public university administrations in the speedy dispense of work.

### **2.3 Work Performance while Working-From-Home (WFH)**

Improving employee work performance is a perennial issue for all organizations during or after the pandemic. Employee performance will leverage the companies' achievements and goal accomplishments (Petcu et al., 2021). The use of the Internet and information and communication technologies (ICT) has assisted with the work continuity of a homebound employee. In evaluating the work performance of UCS employees, the Human Resource Department requires employees to update their logbooks daily; this is for work done, but the quality of work or performance needs to be researched. But in another study, Kawaguchi and Motegi (2021) examined the characteristics of remote work using a unique Japanese survey dataset, indicating that engagement in WFH is another crucial factor for the human resource department to consider. In other words, how effective is WFH during the pandemic? From literature, Allen et al. (2015) posited that the impact of telework is not just about work performance and job satisfaction but includes organizational commitment, work-family issues, attitudes, and interpersonal processes such as knowledge sharing and innovation. But of import are the employees' emotional, physical, and mental health over the more than year-long lockdown periods. The latter issues are being handled by the university management when cases of employees with mentally stressed from being homebound. Therefore, the top management of organizations had to have immediate alignment and remedial strategies to ensure that work productivity continued even with WFH.

### 3.0 Methodology

The study, in part, drew on Baruch and Nicholson's Model of Teleworking (Mihalca et al., 2021), where the variables such as home or family environment, the execution of the employees' job scopes, adjustment to WFH, availability of information, and communication (ICT) equipment formed the basis of the investigation. Also, the study utilized the qualitative research case study in examining the implications of the sudden change of workplace. Does the coronavirus pandemic-induced WFH affect the staff's job satisfaction, performance, and productivity? If so, what were the organizational commitment and management strategies in aligning to these factors? In identifying the correct methodology, the literature reviewed indicated that the qualitative design would best fit the study's scope and objectives. Mohammadi et al. (2021) conducted a similar area and research design where the analysis mirrored this study.

The primary data were collected through an online survey using the Google Form. All department heads at UCS were informed of all UCS staff from all levels and grades to complete the form. The Google Form links were sent via e-mail and the social application Whatsapp. The staff was given two weeks to respond where the department heads will monitor compliance. This is because consensus sampling was used for the 514 UCS staff. Descriptive and frequency analyses were executed using SPSS version 27. For the open-ended questions requiring the respondents to input their views on the study's objectives, the text paragraphs were analyzed within the parameter of five themes. These numbers were later counted and ranked, as shown in the findings in the next section.

### 4.0 Results

The first part of the findings will showcase the demographic variables from the 514 (100%) responses. The next part will highlight the work performance and results of the study were segregated into demographic variables. However, the underlying determinants such as job satisfaction (individual factor), availability of WFH area (home/family environment), keeping daily inputs in employee logbooks (productivity), and other challenges were gauged through the respondents' feedbacks.

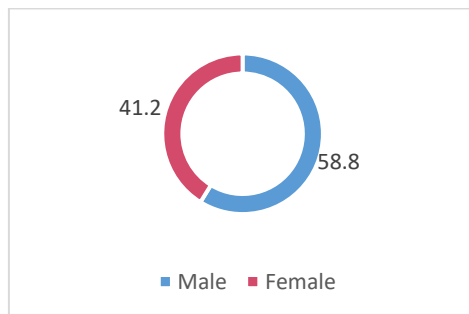


Figure 1: Gender breakdown

The first demographic variable to be analyzed was gender. From the pie chart (Figure 1), there were more male respondents (58.8%) than there were female employees (41.2%). All 514 administrative staff working at the five campuses were accounted for; the gender distribution indicated that UCS has more male employees.

For the distribution by departments (Table 1), the highest number of staff who responded were from the Facilities Department (97), 62 from the Students Affairs Department, 58 from the Dengkil Campus. The departments with the least staff were six staff from the Research and Innovation Division and three from iCARE Division.

Table 1: Breakdown of Respondents by Departments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bursar	51	9.9	9.9	9.9
	Facility	97	18.9	18.9	28.8
	Islamic Affairs	9	1.8	1.8	30.5
	iCARE	3	.6	.6	31.1
	HR Admin	54	10.5	10.5	41.6
	Dengkil	58	11.3	11.3	52.9
	Campus Police	38	7.4	7.4	60.3
	HEP	62	12.1	12.1	72.4
	P. Perdana	33	6.4	6.4	78.8
	R&I	6	1.2	1.2	80.0
	PTAR	52	10.1	10.1	90.1
	Sg Buloh-Selayang	51	9.9	9.9	100.0
	Total	514	100.0	100.0	

The next demographic variable is the age range of the respondents. Table 2 shows that most respondents were from 30-39 years, with 276 responses. This is followed by 134 responses from those aged between 40-49 years and 63 staff aged 50-60 years. The lowest number was 41 from a team aged between 20-29 years.

Table 2: Respondents' Age Range

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-29 years	41	8.0	8.0	8.0

30-39 years	276	53.7	53.7	61.7
40-49 years	134	26.1	26.1	87.7
50-60 years	63	12.3	12.3	100.0
Total	514	100.0	100.0	

Next are the responses for those who were satisfied when working from home (Table 3). As seen from Table 3, 87.2% of the 514 UCS staff are happy working from home compared to 12.8 who were unsatisfied with WFH.

Table 3: Satisfaction from Working-from-home

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Satisfied	448	87.2	87.2	87.2
	Not satisfied	66	12.8	12.8	100.0
	Total	514	100.0	100.0	

Looking at Table 4, the respondents were asked if they experience family or personal issues when working from home. Where 22.4% admitted that there were family and/or emotional issues when working from home. However, 77.6% responded that there were no family issues when WFH.

Table 4: Feedbacks on family or personal issues when WFH

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	115	22.4	22.4	22.4
	No	399	77.6	77.6	100.0
	Total	514	100.0	100.0	

Table 5 evidences the respondents' space issues when working from home, where 63% indicated problems with space when WFH. In other words, the respondents could not find a proper place to focus on work when at home. On the other hand, 36.6% indicated no space issues; that is, these 188 UCS staffs were able to find a proper place to concentrate on work.

Table 5: Space issues when working from home

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	326	63.4	63.4	63.4

	No	188	36.6	36.6	100.0
	Total	514	100.0	100.0	

One statement in the survey form asked the respondents if their homes were adequately equipped with ICT peripherals for WFH. Of the 514 respondents, 328 (63.8%) had ICT equipment, while 186 (36.2%) did not have proper facilities for WFH.

Table 6: Availability of ICT equipment to WFH

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	328	63.8	63.8	63.8
	No	186	36.2	36.2	100.0
	Total	514	100.0	100.0	

Table 7: Employees who keep daily log books while WFH

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	423	82.3	82.3	82.3
	No	91	17.7	17.7	100.0
	Total	514	100.0	100.0	

From Table 7 above, the number of employees who diligently update their logbooks was 423 or 82.3%, while 91 or 17.7% were those who do not keep daily logs of their WFH activities.

To continue, the respondents were asked to choose which WFH issue affected them the most; that is, the problems were ranked according to their perceptions (Table 8). From the feedbacks, limited internet access scored the highest at 250 (48.6%), followed by personal issues at 171 (33.3%). The third-ranked problem was difficulty accessing information for work which amounted to 48 or 9.3%, and last was communication with their superiors which numbered 45 or 8.8%. With the previous results from the survey, the next section will discuss the implications of the findings.

Table 8: Employees' WFH issues

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Limited internet access	250	48.6	48.6	48.6
	Communication with superior	45	8.8	8.8	57.4



Difficult information access	48	9.3	9.3	66.7
Personal issues	171	33.3	33.3	100.0
Total	514	100.0	100.0	

## 5.0 Discussions and HR Practitioner Recommendations

The discussions will begin with the implications of the findings. The first result was the gender breakdown from the consensus sampling of 514 staff working under the umbrella of Universiti Teknologi MARA Cawangan Selangor (UCS). Six campuses fall under the administration of UCS. Thus, the results indicated that staffing at the branch campuses showed more male employees than females. In correlation, the number of employees at the Facilities Department made up for the significant gap in gender breakdown; that is, more male staff attended the infrastructure facilities at the six campuses.

Next, the age range showed that UCS has many mid-career employees at more than 50%. This age range puts the employees in Gen X and millennials categories where they grew up with ICT and the Internet already in place in Malaysia. This result implies relooking at the policy on digital literacy among government employees as advocated by Androff (2019). There could be other personal factors such as limited finances and low-level education. Thus, the alignment strategy for UCS is to send these employees for regular upskills training in ICT.

WFH and its influence on employees' job satisfaction have been extensively analyzed and discussed. Some conditions related to WFH could trigger an increase or decrease in job satisfaction. Based on the findings, it is shown that 87% of 514 employees indicate their overall satisfaction with WFH. In contrast, 17.7% of employees were not satisfied with WFH. Many factors can influence this percentage. The findings are supported by Zollner and Sulikova (2021), which indicated workers satisfaction decreases with WFH only due to solitude, hidden overtime, combining private and work life, or an inappropriate working environment at home.

Considering WFH required employees to combine private and work life, 22.4% of employees experience family or personal issues when WFH. According to Beart et al. (2020), there is a substantial inequality when using a home office, which changes employees' life conditions. It is believed that this life change will affect job satisfaction and productivity of the employees. Ensuring appropriate working conditions for WFH raises many issues (Eurofound, 2021). This research found that employees' workplaces at home are not suitable for WFH. Therefore, 63.4% of respondents claimed they have space issues in this study, while WFH was significant with the previous research.

It is believed that when the restriction imposed by the pandemic will end, hybrid forms of WFH will predominate as these settings would be preferred by employers and employees. Based on the overall findings, the alignment strategy is for employees in the administrative departments to be reskilled and upskilled in information and communication technologies (ICT). Apart from these, employees should ensure that they have the

necessary ICT equipment to work from home. However, 36% of the respondents claimed that they did not have proper facilities for WFH. This problem can impede the UCS staff from staying connected and closely interacting with all employees.

Other concerns of WFH settings are UCS management and reporting between employees and their superiors. Work process monitoring through technology is a necessity. Keeping the logbook updated and sending these to their bosses at the end of the week is necessary. Thus, detailed input should be pre-approved by the university management in a template for standardization.

In addition, communication is a crucial element for WFH. Employees should ensure prompt responses for all forms of communication. By aligning acceptable work practices for WFH, issues on ethics and integrity will diminish. Meetings conducted virtually are the new norm, but employees involved in the discussions should be well prepared. Doubtlessly, remote working for employees requires good internet access and transmission stability during meetings; having these should be the employees' responsibility. However, consideration should be given to lower-grade employees, for example, the clerical staff who cannot afford these necessities. Consider having their schedules for working at the office as per the federal government's standard operating procedures (SOP). The implication for this paper is to attend to the issue of trust for employees allowed to work from home after the pandemic lockdowns.

The study hoped to shed insights into the debatable issue of WFH performance and the implications for the human resource department in allowing employees to continue doing so after the pandemic crisis.

### **5.1 Human Resource (HR) Practitioner Recommendations**

To reinforce the discussions above, additional input in the form of a Human Resource Practitioner recommendations regarding WFH policies for public sector employees are included. Therein, the concept of WFH may seem simple, but in reality, there are many challenges to be faced:

- i) Employees need to ensure the availability of technology, especially high internet access, to ensure that the work done is not interrupted.
- ii) Work discipline and the need to be honest and systematic in task scheduling for the productivity expected by the employer. In the context of UITM, employees need to live, and iDART charity can help during WFH.
- iii) WFH technology applications and platforms need to be learned (ReSkill, UpSkill) by employees; otherwise, the task will be disrupted.
- iv) The biggest challenge is becoming more productive outside of the office organizational structure. The office workplace and a conducive work environment can increase productivity and employees' focus on daily work.
- v) Conducive workspace requirements (ventilation, lighting, and ergonomics) and a two-way communication platform.
- vi) Knowledge and level of understanding of the concept of WFH need to be improved.

- vii) Employers need to prepare clear SOPs about WFH. Loose guidelines will open up to various forms of interpretation.
- viii) Technical support from employers for WFH.
- ix) The employees' ability to capture and expedite instructions that are, to be agile in the dispense of work and tasks
- x) The transparent and responsible nature of employees

## **6.0 Conclusion**

The results from this institutional study provide valuable insights on the staff's conditions and perceptions when WFH. The research project is that the team or respondents were from University Teknologi MARA Cawangan Selangor, Puncak Alam campus, which has the highest number of administrative and academic staff compared to the 34 other university branches in Malaysia. Gauging the respondents' inputs and analyzing their feedbacks have resulted in the university administrators aligning work strategies in preparation for the endemic phase. After almost two years of WFH from the pandemic lockdowns, the white-collar staff will have options of continuing to telework, depending on the university administrators' adjusted policies.

As noted above, the paper aims to provide empirical evidence on the university workforce's alignment strategies in achieving the key performance indicators of WFH. The top management of organizations had to have immediate alignment and remedial techniques to ensure that work productivity continued even with WFH. For Universiti Teknologi MARA Cawangan Selangor (UCS), the abrupt shift of staff working from office to home requires that their workload and job performance are not jeopardized. At all times, the employees' WFH must ensure work commitment and compliance to the client's charter by ensuring that tasks are completed on time, and key performance indicators (KPI) are fulfilled. The findings from the study will assist public administrators. In this case, the UCS management trains for an agile and digital workforce for effective and efficient work performance in the forthcoming endemic era.

## **Acknowledgment**

We are grateful to the top management of Universiti Teknologi MARA Cawangan Selangor for allowing researchers from the Human Resource Department to conduct the study without any funding except for time allocation to focus on the investigation and reports.

## **Article Contribution to Related Field of Study**

This paper contributes to the related fields of behavioral and human resource management studies.

## References

- Allen, T. D., Golden, T. D., & Shockley, K. M. (2015). How effective is telecommuting? Assessing the status of our scientific findings [Article]. *Psychological Science in the Public Interest*, 16(2), 40-68. <https://doi.org/10.1177/1529100615593273>
- Androsoff, R. (2019). The public service's digital literacy problem. *Wiring Public Policy for Digital Government*. Retrieved October 9, 2021, from <https://policyoptions.irpp.org/magazines/february-2019/the-public-services-digital-literacy-problem/>
- Ansell, C., Sørensen, E., & Torfing, J. (2021). The COVID-19 pandemic as a game changer for public administration and leadership? The need for robust governance responses to turbulent problems [Article]. *Public Management Review*, 23(7), 949-960. <https://doi.org/10.1080/14719037.2020.1820272>
- Brown, C., Smith, P. R., Arduengo, N., & Taylor, M. (2016). Trusting telework in the federal government [Article]. *Qualitative Report*, 21(1), 87-101, Article 8. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84955065435&partnerID=40&md5=491092e3b123b7e548b65f310d5d9984>
- Carnevale, J. B., & Hatak, I. (2020). Employee adjustment and well-being in the era of COVID-19: Implications for human resource management [Article]. *Journal of Business Research*, 116, 183-187. <https://doi.org/10.1016/j.jbusres.2020.05.037>
- Feldmann, A., Gasser, O., Lichtblau, F., Pujol, E., Poese, I., Dietzel, C., Wagner, D., Wichtlhuber, M., Tapiador, J., Vallina-Rodriguez, N., Hohlfeld, O., & Smaragdakis, G. (2021). A year in lockdown: How the waves of COVID-19 impact internet traffic [Article]. *Communications of the ACM*, 64(7), 101-108. <https://doi.org/10.1145/3465212>
- Glossary, G. (2021). *Remote Work*. Gartner Information Technology. Retrieved October 8 from <https://www.gartner.com/en/information-technology/glossary/remote-work>
- Kahn, Z., & Burrell, J. (2021). A Sociocultural Explanation of Internet-Enabled Work in Rural Regions [Article]. *ACM Transactions on Computer-Human Interaction*, 28(3), Article 17. <https://doi.org/10.1145/3443705>
- Kawaguchi, D., & Motegi, H. (2021). Who can work from home? The roles of job tasks and HRM practices [Article]. *Journal of the Japanese and International Economies*, 62, Article 101162. <https://doi.org/10.1016/j.jjie.2021.101162>
- Kim, T., Mullins, L. B., & Yoon, T. (2021). Supervision of Telework: A Key to Organizational Performance [Article]. *American Review of Public Administration*, 51(4), 263-277. <https://doi.org/10.1177/0275074021992058>
- Lecours, A., Gilbert, M. H., Lord, M. M., Labrecque, C., & Boucher, F. (2021). Telework in a pandemic context: Protocol of a participatory study on the effects of teleworking conditions on the well-being and social participation of workers [Article]. *BMJ Open*, 11(8), Article e051099. <https://doi.org/10.1136/bmjopen-2021-051099>
- Liebermann, S. C., Blenckner, K., Diehl, J. H., Feilke, J., Frei, C., Grikscheit, S., Hünsch, S., Kohring, K., Lay, J., Lorenzen, G., & Reinhardt, J. (2021). Abrupt Implementation of Telework in the Public Sector during the COVID-19 Crisis: Challenges to Transformational Leadership [Article]. *Zeitschrift für Arbeits- und Organisationspsychologie*, 65(4), 258-266. <https://doi.org/10.1026/0932-4089/a000367>

McGrew, S. (2021). Challenging approaches: Sharing and responding to weak digital heuristics in class discussions [Article]. *Teaching and Teacher Education*, 108, Article 103512. <https://doi.org/10.1016/j.tate.2021.103512>

Mihalca, L., Irimias, T., & Bredea, G. (2021). Teleworking During The Covid-19 Pandemic: Determining Factors Of Perceived Work Productivity, Job Performance, And Satisfaction [Article]. *Amfiteatru Economic*, 23(58), 620-636. <https://doi.org/10.24818/EA/2021/58/620>

Murawski, M., & Bick, M. (2017). Digital competences of the workforce—a research topic? *Business Process Management Journal*.

Petcu, M. A., Sobolevski-David, M. I., Anica-Popa, A., Curea, S. C., Motofei, C., & Popescu, A. M. (2021). Multidimensional assessment of job satisfaction in telework conditions. Case study: Romania in the covid-19 pandemic [Article]. *Sustainability (Switzerland)*, 13(16), Article 8965. <https://doi.org/10.3390/su13168965>

Renard, K., Cornu, F., Emery, Y., & Giauque, D. (2021). The Impact of New Ways of Working on Organizations and Employees: A Systematic Review of Literature. *Administrative Sciences*, 11(2), 38. <https://www.mdpi.com/2076-3387/11/2/38>

Shipman, K., Burrell, D. N., & Huff Mac Pherson, A. (2021). An organizational analysis of how managers must understand the mental health impact of teleworking during COVID-19 on employees [Article]. *International Journal of Organizational Analysis*. <https://doi.org/10.1108/IJOA-03-2021-2685>

Siddoo, V., Sawattawee, J., Janchai, W., & Thinnukool, O. (2019). An exploratory study of digital workforce competency in Thailand [Article]. *Heliyon*, 5(5), Article e01723. <https://doi.org/10.1016/j.heliyon.2019.e01723>

Zhang, C., Yu, M. C., & Marin, S. (2021). Exploring public sentiment on enforced remote work during COVID-19 [Article]. *Journal of Applied Psychology*, 106(6), 797-810. <https://doi.org/10.1037/apl0000933>

Zollner, K., & Sulikova, R. (2021). Teleworking and its influence on job satisfaction. *Journal of Human Resources Management Research*, 2021(2021), 18. <https://doi.org/10.5171/2021.558863>