

COVID-19: Accelerating Digital Transformation for University's Research Administration

1st Putra Adi Syani

Center of Research and Publication
(PUSLITPEN) LP2M
UIN Syarif Hidayatullah
Jakarta, Indonesia
syani@uinjkt.ac.id

2nd Maila D.H. Rahiem

Early Childhood Education
Department
UIN Syarif Hidayatullah
Jakarta, Indonesia
mailadnia@uinjkt.ac.id

3rd Imam Subchi

Islamic History and Civilization
Department
UIN Syarif Hidayatullah
Jakarta Indonesia
imam.subchi@uinjkt.ac.id

4th Rina Suryani

Center of Research and Publication
(PUSLITPEN) LP2M
UIN Syarif Hidayatullah
Jakarta, Indonesia
rina.suryani@uinjkt.ac.id

5th Fauqi Kurniawan

Center of Research and Publication
(PUSLITPEN) LP2M
UIN Syarif Hidayatullah
Jakarta, Indonesia
Fauqi.kurniawan@uinjkt.ac.id

6th Gunawan

Faculty of Adab and Humanities
UIN Syarif Hidayatullah
Jakarta, Indonesia
gunawan@uinjkt.ac.id

Abstract—This study examined how COVID-19 has accelerated the digital transformation of research administration at the State Islamic University of Syarif Hidayatullah (UIN Jakarta). A mixed-method embedded approach was used in this study, with data obtained from a web-based survey and also focus group discussions (FGDs). The survey involved 137 grant recipients from UIN Jakarta. The FGDs included eight research administrators from the Center of Research and Publication (Puslitpen) UIN Jakarta, who six of them are also the researchers for this report. The data revealed: 1) COVID-19 has accelerated the use of digital technology in research administration 2) 67.9 percent of grant recipients stated that it was easy to use the national integrated research management system for Islamic Higher Education (Litapdimas app), but there are still some issues that need to be improved; 3) 94.4 percent of the grant recipients found that the online service provided by the center was very helpful and they suggested to continue its use. As COVID-19 is a worldwide issue, these findings are also useful for other research administration offices to learn how different forms of digital technology can improve the delivery of research administration services.

Keywords—digital technology, ICT, research administration, COVID-19, higher education

I. INTRODUCTION

The COVID-19 epidemic was first identified in Wuhan, China, in December 2019 [1]–[4]; but cases are now on a global scale, and more and more people have become infected with the virus, while a vaccine has not yet been found [5]–[7]. The World Health Organization (WHO) declared a pandemic situation in March 2020 [8]–[10]. Governments in multiple countries have implemented non-pharmaceutical strategies to minimize the rate of virus transmission so that health systems are not overwhelmed [11]–[13]. Common policies introduced include social distancing, quarantine, travel bans, closure of non-essential public facilities, including the closure of educational establishments.

The closing of a school or university campus does not imply that there is no activity happening; the process of teaching and learning continues as usual, as does research. In Indonesia, faculty members at higher education institutions have three duties to fulfill, which is called *Tri Dharma*, namely: teaching, research, and community service. These three practices continue to be performed, even though there is limited physical human mobility both in and outside the

campus. Students and lecturers are indeed not allowed to be at the campus, and only a limited number of essential staff remain working at the office.

In an unexpected situation, such as the COVID-19 pandemic, public service provisions cannot be withdrawn but must be made accessible online, based on the available digital technologies [14]. Most of these activities are therefore evolving digitally. The provision of public services to students, lecturers, and the general public is similar. COVID-19 triggers digital acceleration, with information and communications technology (ICT) now becoming very important within society.

In this study, researchers looked at the research administration work arrangements performed by the Research and Publishing Center (Puslitpen) at the Syarif Hidayatullah State Islamic University, Jakarta (UIN Jakarta). This office administers research grants from the funding of higher education operational assistance (BOPTN) provided by the Republic of Indonesia's government, which is given to lecturers, laboratory assistants, and librarians at UIN Jakarta.

When the rector declared the campus's closure due to COVID-19 on 16 March 2020, the grant recipients had already signed their grant agreements and had begun their data collection activities; research was progressing, and the first phase of 60 percent research funding had already been disbursed. However, the remaining 40 percent of the research funding would not be paid out because the funds had already been allocated to help handle the COVID-19 crisis.

Grant recipients bound by the signed contract had to carry out each stage of the research as designed by their respective teams. Likewise, The Puslitpen team must also oversee and organize the delivery of the research activities carried out for the 2020 fiscal year with 161 research grant recipients distributed across seven clusters. In normal times Puslitpen offers correspondence, documentation, research permits, and other services related to research to the grant recipients in-person. This was impossible to do without changes being made at the time of the COVID-19 crisis. Still, the Puslitpen administration team aimed to provide full assistance to grant recipients by various means.

Digital technology is not new to the center. The national integrated research management system for Islamic Higher Education Litapdimas System has been in operation since

2018. Before that, the center had its own web-based research management program. During COVID-19, adjustments were made to prioritize all-digital online reporting. Although many research grant recipients preferred to have paper-based documents, due to the social distance and campus closure policy, the administrators became more reliant on digital technology in handling this year's research grant administration.

The communication involved personal messages using WhatsApp and WhatsApp Groups. This means of communication was undertaken not only during the Covid-19 period, but before, more researchers used to prefer to come directly to the office to consult or seek research-related administration support. It seemed more convenient for the grant recipients to have face to face meetings. Puslitpen, however, announced to the grant recipients that the office was closed for consultation meetings or requests for printed papers due to the large number of people continuing to come to the office. Two or three administrators were still present in the workplace, but visitors must be limited to minimize physical interactions, and much of the administration work and services were given digitally.

These shifts in the use of technology and adaptations to global conditions require multiple parties to work together to ensure that they are a success. Agostino [14] highlights three major dilemmas of service delivery during COVID-19 crises: user engagement, planning and management, and expense. The Puslitpen office faces these dilemmas as well. Technology transition has intensified as a result of the global health crises. The three dilemmas illustrate the social and organizational challenges associated with digital transformation, showing the organization's issues in the future and not only in an emergency like COVID-19.

In this study, the researchers wanted to see how attempts to digitize certain components of research administration systems had been made and how the grant recipients reacted. This study is important to provide an understanding of how the phenomenon of COVID-19 has driven the expanded use of digital technology in research services and management. This report also provides recommendations about what can be done in the future to encourage ICT usage to improve public services and administration.

II. METHODOLOGY

The method of study employed was a mixed-method embedded approach. This study described the characteristics, meaning, and mechanism of the digital transformation phenomenon at the Puslitpen. Quantitative data was derived from survey results with grant recipients, and qualitative data were derived from open-ended survey questions and dialogue with the research administration team during FGDs, who are also the researchers in this report. Survey activities are a part of Puslitpen's monitoring and assessment activities to assess research administration implementation and management efficacy. Typically, the surveys are conducted on a paper-based basis, but this year's survey was conducted online due to the COVID-19 outbreak, which led to campus activities' closure. Routine survey activities are performed at the middle and end of the research process. The survey component is not limited to the two survey results presented in this paper (Litapdimas and online services). Survey questions are organized on Google Forms so that participants can answer

automatically, and the program instantly reveals the percentage of responses.

The survey questions in which data are discussed in this paper are: 1) How do you rate the Litapdimas app? 2) How does Puslitpen provide online service provision? Other survey components that are not presented in this paper are the implementation of research, the number of samples, data collection points, and research budgets. The survey was distributed to 161 researchers/research teams that this year received funding, comprising seven research clusters and two publishing clusters. However, the survey form was only completed by 137 researchers/research teams. The survey was conducted from 21-31 August 2020, or one month before the end of the 2020 fiscal year research phase, marked by the recipient's submission of the research report (the reporting deadline was 28 September).

The answers to the survey questions are then tabulated and displayed in graphical form to analyze the answers later. The analysis was carried out in the FGDs activity, which was attended by eight research administrators. In the FGDs, how grant recipients assess the use of Litapdimas and evaluate the Puslitpen arranged online service was addressed. Discussion outcomes were reported in the minutes and memos.

In this paper, the survey data is presented in graphical form, then analyzed in an analytical narrative. Before circulating the survey, as suggested by Alumran et al. [15], researchers consulted with research instrument experts to ensure the survey instrument's validity and reliability. The researchers respect research ethics, while the confidentiality of the survey participants' identity was also always protected. Survey participants understood that the surveys were part of the research phase and that the survey findings were used to enhance the research administration. They also realized that the survey data was being used for reporting and publication by the center.

The FGDs participants signed the informed research consent, and they participated in the discussion activity voluntarily and without coercion and were informed that they could withdraw from the research at any point and without notice if they felt uncomfortable with the process and results.

III. FINDINGS

The results revealed 1) COVID-19 has accelerated the use of ICT in research management. During this pandemic, the use of ICT has become more intensive; 2) the grantees have found it easy to use the Litapdimas app, although there are still issues that need to be improved; 3) the grantees have noticed that the center's online service has been of great help.

A. The transformation from Paper-Based to Online Administration and Service

In the FGD, the Puslitpen office research administrators addressed what programs or documents had been digitized for some time (before the COVID-19 outbreak) and which ones had been transformed digitally during the COVID-19 era. The following is a list of existing-on-line systems and programs that were updated to go online:

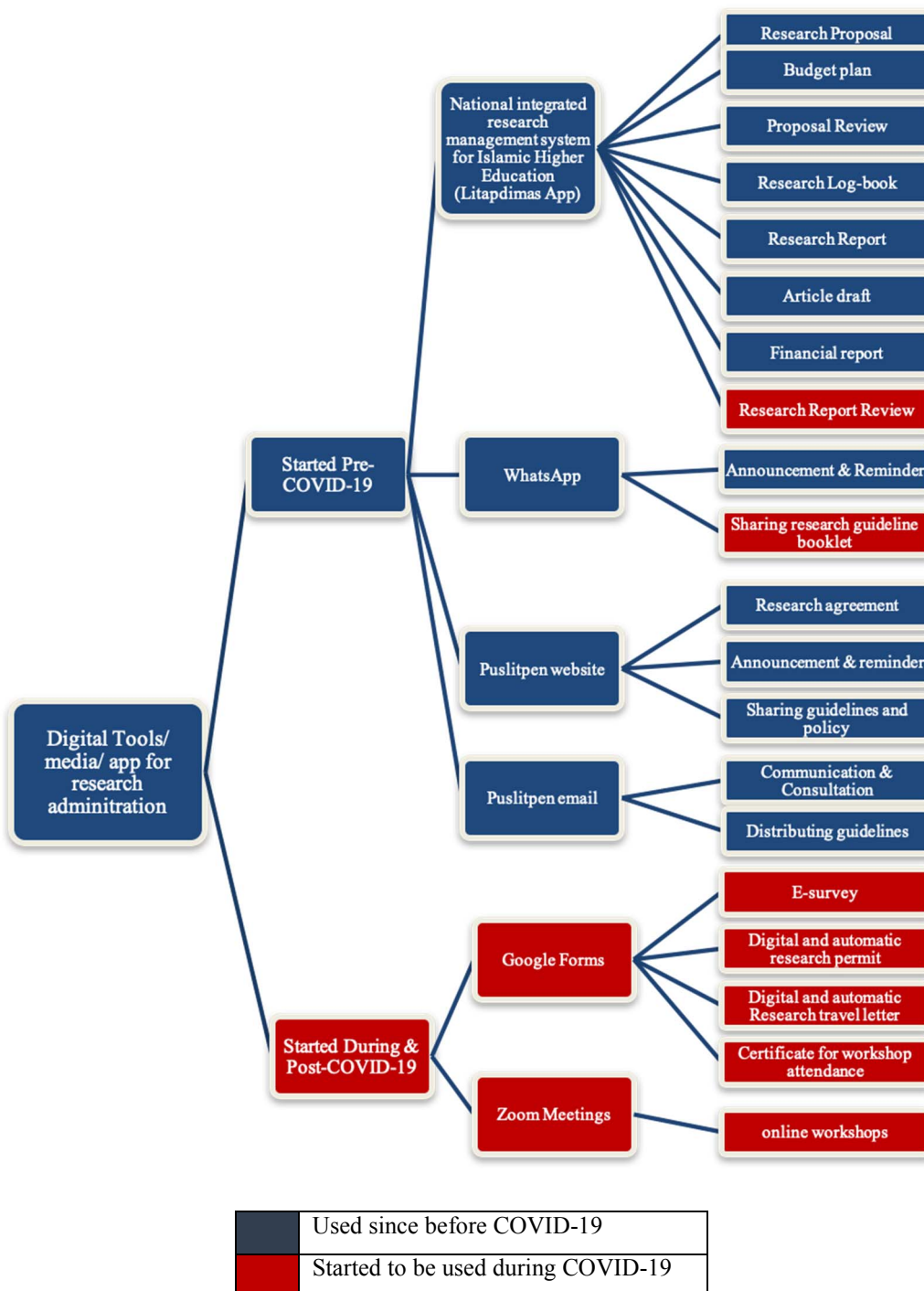


Fig. 1. Digital Tools and Usages

The figure above indicates the dark blue squares, which are methods or programs used before the COVID-19 outbreak, while the red squares were only recently used as a result of the COVID-19 outbreak. Six key digital programs used by Puslitpen include Litapdimas, website, WhatsApp, email, Google Forms, and Zoom meetings. Litapdimas was initially used to obtain a research proposal and budget plan, review the proposal, write a research log-book, submit a research report, draft papers, and financial reports. Litapdimas is, however, now being used for the first time for analyzing research performance (report reviewing).

The Puslitpen website is a quick and reliable way to reach out to both grant recipients and the public. Puslitpen used the website to announce grant selections and other alerts, publish grant agreements, and share policy and guidance on research. The Puslitpen team maintains contact with recipients of the grants mainly through WhatsApp. WhatsApp is often used to send reminders (e.g., reporting deadlines). Puslitpen often shared research guidelines and other information in printed copies, one for each individual study/research team. This year, because of COVID-19, Puslitpen published an e-booklet for the research guidelines and posted it online. The

transformation of technology-based research management has reduced paper usage. Puslitpen also uses email to connect with grant recipients. However, it is not as frequent as the use of WhatsApp, as grant beneficiaries prefer to communicate through WhatsApp. In the wake of the pandemic outbreak, the use of email and WhatsApp for contact has increased dramatically.

Two digital services were recently introduced during the pandemic Puslitpen: Google Forms and Zoom meetings. The Google Forms are used for web-based surveys, electronic research permits and research travel letters, and online workshop attendance certificates. These changes became an innovative shift. Grant recipients usually came to the office when they wanted to consult about project management and funding and get a study permit and travel letter. This year, these last two letters started being processed digitally. Puslitpen used to provide research grant recipients in classroom face-to-face workshops. The workshop topics on techniques for collecting and analyzing data, preparing and writing reports, and others. In the last six months, since the lockdown, Puslitpen has held at least ten online workshops.

B. The Beneficial Use of Litapdimas App

The Litapdimas application is an information system used by the researchers from the proposal's selection stage, completing research activities (log-books) to reporting the study results. The survey results show that grant recipients find the Litapdimas program is easy to use (67.9 percent). However, the researchers still face some problems, such as the log-book menu, which cannot be accessed from the new Litapdimas application; researchers have to use the old Litapdimas application to complete the log-book (the latest Litapdimas application was implemented in 2020). In the meantime, the problem faced by Litapdimas administrators (Puslitpen staff) is that the uploaded research reports cannot be recapitulated automatically as a whole, so administrators need to view/download the research reports one by one. Another recommendation from grant recipients and research managers is to enhance the website's appearance. The Litapdimas website menu display is still not user-friendly; some users still need to ask administrators on how to use it.

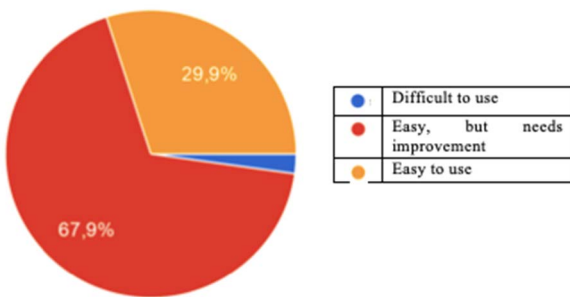


Fig. 2. The Use of the Litapdimas App

C. The New and Improved Online Service for Grant Recipients

Puslitpen of UIN Jakarta provides administrative support to research grant beneficiaries through various online applications during the COVID-19 social distancing period. Administrative support is usually carried out by Puslitpen in the offices' and using printed records, such as providing research licenses, checking official travel

documents, and other research papers that may now be performed online. Nearly all researchers (93.4 percent) found the service to be helpful. Other than that, they were happy that up-to-date information could be accessed through the Puslitpen website, research methodology workshops are conducted through the Zoom meet program, and online research reporting is conducted through the Litapdimas application. Research grant recipients say that Puslitpen should continue to use this technology in future research management and administrative support.

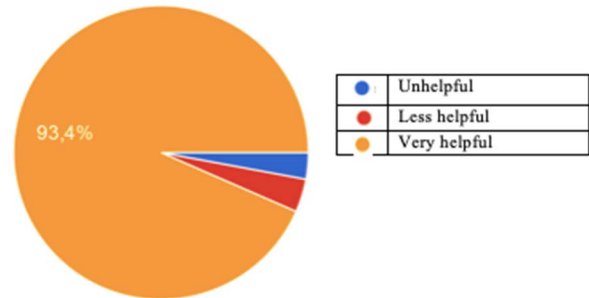


Fig. 3. The Use of New Programs

IV. DISCUSSION

The COVID-19 crisis sums up the advantages of digital transformation and its disadvantages. The rapid transformation of the use of technology also shows the organization's readiness to cope with developments and external circumstances, the capacity of the staff and team to make adjustments, and the willingness of the users to adapt to transitions of digital innovations and shortcomings evident in a very short time [16]. This rapid transition often speeds up technology usage, and the effects are instantly apparent since it is applied immediately.

Survey findings from this study revealed that grant recipients had constructively embraced the technology. They understood that it makes research administration and support for grant recipients easier and more efficient. However, some grant recipients had not been previously acquainted with this digital service. So, they still came to the Puslitpen office to ask for research-related documents. Puslitpen had to announce that the office was limiting the number of visitors. The situation pushed the grant recipients to try and adapt to the digital support services provided by Puslitpen. Many were shocked at how easily they could obtain research permits by filling in the forms and then immediately obtaining the permit letter in their inbox. They asked the administrators, "Is that all I need to do?!"

Most of those were older grant recipients, who needed to be persuaded to use technology. Vaporizer et al. [17] examined the technical expectations and obstacles to communicating with tablet computers among older adults. The research shows that most older adults are excited to embrace modern technology and be willing to learn. However, they expressed apprehension about a lack of clarification in both guidance and support. Understanding older adults' attitudes about technology are crucial to help bring it to this demographic and optimize its potential. This experience also occurred in Puslitpen's launch of new web-based services. Users were anxious and needed some instructions on how to use it properly.

The health crisis has led to a restriction of mobility for some people. Administration and public services have been much more dependent on technology. Without the COVID-19 lockdown, this technology transition would have required many more years to become established like it seems to be currently. The COVID-19 pandemic has had a significant and rapid effect on higher education institutions worldwide [18].

This research showed that COVID-19 accelerated the use of emerging technologies in the administration and public service. Curtis (2020) calls it the magic bullet to boost public service. Digital transformation can enhance performance, capacity building and create a framework for constantly developing services to empower consumers and users [19].

Some of the Puslitpen team worked remotely from home, while two to three administrators remained on standby every day at the office. Team members remained committed to attaining institutional goals. Operating individually, not in one office room, provided the administrators with the flexibility to prepare initiatives that needed to be taken independently to complete organizational work that used to be done collectively. Team members used their respective competencies to operate. The distance was not, therefore, an impediment. A remote working model allows teams to be formed based on team members' skills and abilities rather than on geographic proximity [20]. The teams' ability to effectively perform their task is tied to their distributed situational understanding [21]. Puslitpen's administrative team understands the dire global health conditions and is aware that work needs to continue, so they organized work accordingly in response to the current situation.

The pandemic rapidly accelerated predicted trends in information management [19]. COVID-19 has fundamentally changed many facets of human life and global culture for years to come. A main aspect of the transition has been the increased digitization and the rapid introduction of previously expected developments addressed in the literature on information management for several years, to have happened in a blink. Despite all the limitations, the grant recipients' responses to the use of new technology have been very positive. They found the ICT was very effective (93.4 percent), and the web-based program was also easy to use (69.9 percent).

In this report, the research grant recipients were very pleased with Puslitpen's services during the COVID-19 period and advised Puslitpen to continue advancing technology usage. They stated that the web-based administration and management support for grant recipients was concise and rapid. This also eased the research grant administrators' work.

Teleworking has improved productivity through lower distractions, increased happiness, decreased stress, and increased efficiency [22]. Nevertheless, teleworking is also considered to have potentially detrimental effects on mental health and emotions such as loneliness, anxiety, and guilt [23]. Technology transformation is an opportunity to examine how best to use technology to create innovative and efficient ways of providing public services [24].

Technology has allowed various activities to be performed from anywhere [25]–[27]; and in emergencies that restrict physical contact with humans. This pandemic has

forced changes. The technology which previously might have been avoided due to fear of trying had to be used. This is a challenge for the future; to use this technology sustainably and ensure that it continues to evolve.

V. CONCLUSION

This research uses only one university case study, and the sample size is relatively small, too. The findings of the study cannot be applied to a larger population. However, this study also has considerable advantages, including an overview of how COVID-19 has fast-tracked digital technology transformation in higher education institution research administration. COVID-19 is not the first or the last virus impacting humanity [28]. Therefore, the administration's digitalization is an example of an important initiative that could be used to address future health risks and other disaster threats in the future. This research also shows how to use basic software like Google Forms to simplify matters relating to finance and administration. This study's findings can be used as a preliminary reference to study further how to build a reliable and simplified technology-based research grants administration system.

AUTHORS CONTRIBUTION

Putra Adi Syani designed the survey instrument, performed the data collections, analyzed the data, prepared figures, and approved the final draft. Maila D.H. Rahiem conceived and designed the research protocols, performed the data collections, analyzed the data, prepared figures, authored, reviewed drafts of the paper, and approved the final draft. Imam Subchi, Rina Suryani, Fauqi Kurniawan, and Gunawan performed the data collections and analyzed the data.

REFERENCES

- [1] Q. Lin *et al.*, "A conceptual model for the coronavirus disease 2019 (COVID-19) outbreak in Wuhan, China with individual reaction and governmental action," *International Journal of Infectious Diseases*, vol. 93, pp. 211–216, Apr. 2020, doi: 10.1016/j.ijid.2020.02.058.
- [2] Z. Y. Zu *et al.*, "Coronavirus Disease 2019 (COVID-19): A Perspective from China," *Radiology*, vol. 296, no. 2, pp. E15–E25, Aug. 2020, doi: 10.1148/radiol.2020200490.
- [3] J. Yang *et al.*, "Prevalence of comorbidities and its effects in patients infected with SARS-CoV-2: a systematic review and meta-analysis," *International Journal of Infectious Diseases*, vol. 94, pp. 91–95, May 2020, doi: 10.1016/j.ijid.2020.03.017.
- [4] A. Pan *et al.*, "Association of Public Health Interventions With the Epidemiology of the COVID-19 Outbreak in Wuhan, China," *JAMA*, vol. 323, no. 19, p. 1915, May 2020, doi: 10.1001/jama.2020.6130.
- [5] H. Li, S.-M. Liu, X.-H. Yu, S.-L. Tang, and C.-K. Tang, "Coronavirus disease 2019 (COVID-19): current status and future perspectives," *International Journal of Antimicrobial Agents*, vol. 55, no. 5, p. 105951, May 2020, doi: 10.1016/j.ijantimicag.2020.105951.
- [6] R. Keni, A. Alexander, P. G. Nayak, J. Mudgal, and K. Nandakumar, "COVID-19: Emergence, Spread, Possible Treatments, and Global Burden," *Frontiers in Public Health*, vol. 8, May 2020, doi: 10.3389/fpubh.2020.00216.
- [7] Y.-C. Wu, C.-S. Chen, and Y.-J. Chan, "The outbreak of COVID-19," *Journal of the Chinese Medical Association*, vol. 83, no. 3, pp. 217–220, Mar. 2020, doi: 10.1097/JCMA.0000000000000270.
- [8] S. Khan, R. Siddique, A. Ali, M. Xue, and G. Nabi, "Novel coronavirus, poor quarantine, and the risk of pandemic," *Journal of Hospital Infection*, vol. 104, no. 4, pp. 449–450, Apr. 2020, doi: 10.1016/j.jhin.2020.02.002.
- [9] A. Spinelli and G. Pellino, "COVID-19 pandemic: perspectives on an unfolding crisis," *British Journal of Surgery*, vol. 107, no. 7, pp. 785–787, Jun. 2020, doi: 10.1002/bjs.11627.

- [10] J. A. Smith and J. Judd, "COVID-19: Vulnerability and the power of privilege in a pandemic," *Health Promotion Journal of Australia*, vol. 31, no. 2, pp. 158–160, Apr. 2020, doi: 10.1002/hpja.333.
- [11] N. G. Davies *et al.*, "Effects of non-pharmaceutical interventions on COVID-19 cases, deaths, and demand for hospital services in the UK: a modelling study," *The Lancet Public Health*, vol. 5, no. 7, pp. e375–e385, Jul. 2020, doi: 10.1016/S2468-2667(20)30133-X.
- [12] S. Flaxman *et al.*, "Estimating the effects of non-pharmaceutical interventions on COVID-19 in Europe," *Nature*, vol. 584, no. 7820, pp. 257–261, Aug. 2020, doi: 10.1038/s41586-020-2405-7.
- [13] N. Imai *et al.*, "Adoption and impact of non-pharmaceutical interventions for COVID-19," *Wellcome Open Research*, vol. 5, p. 59, Apr. 2020, doi: 10.12688/wellcomeopenres.15808.1.
- [14] D. Agostino, M. Arnaboldi, and M. D. Lema, "New development: COVID-19 as an accelerator of digital transformation in public service delivery," *Public Money & Management*, pp. 1–4, May 2020, doi: 10.1080/09540962.2020.1764206.
- [15] A. Alumran, X.-Y. Hou, and C. Hurst, "Validity and reliability of instruments designed to measure factors influencing the overuse of antibiotics," *Journal of Infection and Public Health*, vol. 5, no. 3, pp. 221–232, Jun. 2012, doi: 10.1016/j.jiph.2012.03.003.
- [16] A.-M. Nienaber and A. Woodcock, "Digital transformation in public administration – COVID 19 created the sense of urgency," Coventry, 2020. [Online]. Available: <https://pureportal.coventry.ac.uk/en/publications/digital-transformation-in-public-administration-covid-19-created->
- [17] E. Vaportzis, M. Giatsi Clausen, and A. J. Gow, "Older Adults Perceptions of Technology and Barriers to Interacting with Tablet Computers: A Focus Group Study," *Frontiers in Psychology*, vol. 8, Oct. 2017, doi: 10.3389/fpsyg.2017.01687.
- [18] N. Johnson, G. Veletsianos, and J. Seaman, "U.S. Faculty and Administrators' Experiences and Approaches in the Early Weeks of the COVID-19 Pandemic," *Online Learning*, vol. 24, no. 2, Jun. 2020, doi: 10.24059/olj.v24i2.2285.
- [19] S. Curtis, "Digital transformation—the silver bullet to public service improvement?," *Public Money & Management*, vol. 39, no. 5, pp. 322–324, Jul. 2019, doi: 10.1080/09540962.2019.1611233.
- [20] S. P. Robbins and T. A. Judge, *Essentials of Organizational Behavior* (Fourteenth Edition). 2018.
- [21] L. J. Sorensen and N. A. Stanton, "Y is best: How Distributed Situational Awareness is mediated by organisational structure and correlated with task success," *Safety Science*, vol. 56, pp. 72–79, Jul. 2013, doi: 10.1016/j.ssci.2012.05.026.
- [22] Y. Baruch, "Teleworking: benefits and pitfalls as perceived by professionals and managers," *New Technology, Work and Employment*, vol. 15, no. 1, pp. 34–49, Mar. 2000, doi: 10.1111/1468-005X.00063.
- [23] S. Mann and L. Holdsworth, "The psychological impact of teleworking: stress, emotions and health," *New Technology, Work and Employment*, vol. 18, no. 3, pp. 196–211, Nov. 2003, doi: 10.1111/1468-005X.00121.
- [24] N. R. Wijesooriya, V. Mishra, P. L. P. Brand, and B. K. Rubin, "COVID-19 and telehealth, education, and research adaptations," *Paediatric Respiratory Reviews*, vol. 35, pp. 38–42, Sep. 2020, doi: 10.1016/j.prrv.2020.06.009.
- [25] A. de Souza e Silva, "From Cyber to Hybrid," *Space and Culture*, vol. 9, no. 3, pp. 261–278, Aug. 2006, doi: 10.1177/1206331206289022.
- [26] G. A. Akpakwu, B. J. Silva, G. P. Hancke, and A. M. Abu-Mahfouz, "A Survey on 5G Networks for the Internet of Things: Communication Technologies and Challenges," *IEEE Access*, vol. 6, pp. 3619–3647, 2018, doi: 10.1109/ACCESS.2017.2779844.
- [27] A. Al-Fuqaha, M. Guizani, M. Mohammadi, M. Aledhari, and M. Ayyash, "Internet of Things: A Survey on Enabling Technologies, Protocols, and Applications," *IEEE Communications Surveys & Tutorials*, vol. 17, no. 4, pp. 2347–2376, 2015, doi: 10.1109/COMST.2015.2444095.
- [28] L. Cluver *et al.*, "Parenting in a time of COVID-19," *The Lancet*, vol. 395, no. 10231, p. e64, Apr. 2020, doi: 10.1016/S0140-6736(20)30736-4.