Digital Communication and Employee Relations in Selected Universities in Rivers and Bayelsa States during Covid-19 Lockdown

BUFUMOH, Akpoebi Alex[1]
Ph.D Student of Department of English and Communication Art, Ignatius Ajuru University of Education, Rivers State.
08037069791; alexymoh@gmail.com

MBAZIE, Sunny Chiawolamoke Jeremiah (Ph.D)[2]
Lecturer in Department of Linguistics and Communication Studies, University of Port Harcourt. Rivers State.
08037083679; mbaziesunny@gmail.com

Abstract

This study examined the digital communication and employee relations in selected universities in Rivers and Bayelsa States during Covid-19 lockdown. The objectives of the study were to find out digital communication techniques used in each of the universities in Rivers and Bayelsa States during Covid-19 lockdown in employee relations among others. The study adopted the analytical descriptive survey design. The population of the study was 20,605 academic staff, non-teaching staff and management of public tertiary institutions in Rivers and Bayelsa States. The sample size was 400 and multi-stage sampling technique. The instrument of the study was questionnaire and the data analysis was done using mean, standard deviation and rank order. Findings from the study revealed digital remarks, asynchronous communication, communication consistent, clarity and brevity, making every message count, precise communication and continuous communication quality were the digital communication techniques employed in each universities under study during Covid-19 lockdown in Rivers and Bayelsa States among others. The study concluded that technology is an essential tool to offer in employees' relations because of its benefits such as delivery of timely information, enhancement of employee relations activities and empowerment, increase of organizational transparency. The study recommended that the Universities should ensure strict compliance to digital communication techniques such as digital remarks, clarity and brevity, asynchronous communication which are positive and appropriate for employee relations during tough time.

Keywords: Digital, communication, employee, relations, Covid-19.

Introduction

The year 2020 has brought unprecedented changes to the global economy and the world of work. On the 11th of March, the World Health Organization (WHO) characterized the novel coronavirus outbreak as a pandemic, and urged governments around the world to take matters seriously and prepare for the first wave of the public health emergency with several drastic measures, one of which was the nationwide lockdowns in many countries (WHO, 2020a). As the lockdowns or stay-at-home measures entered into force, a large

proportion of the workforce was instructed to stay home and continue to work remotely - if their functions make it possible. Organizations that were previously familiar with teleworking, as well as organizations that haven't experimented with teleworking before, were sending their employees home, creating the conditions for the most extensive mass teleworking (digital communication) experiment in history. Though the number of people teleworking part-time or on a full-time basis has been gradually increasing over the years (Eurostat, 2018), the pandemic has certainly fast-tracked the adoption of digital communication modalities by employers. In a scenario such as the COVID-19 pandemic, digital communication has proven itself an important aspect of ensuring business continuity, whereas under normal circumstances its benefits include reduced commuting time, increased opportunity for workers to focus on their work tasks away from the distractions of the office, as well as an opportunity for better work-life balance. Digital communication in an organization or workplace offers the opportunity for a more flexible schedule for workers and the freedom to work from an alternative location, away from the premise of the employer. There may also be risks, such as isolation (particularly for individuals living alone), and the loss of contact with fellow employees, which it is essential to anticipate and prevent.

Today, the organization especially, university institutions are changing in relation to the global pandemic of COVID-19. Human resource managers are persistently evolving innovative, creative, and effective ways to engage the employees in a healthier way during this difficult time. Employee relations is a workplace attitude that is ensuing all adherents of an organization to give their excellence every day, committed toward their organization's goals and values. Organizations always remember that employees who are well engaged in an organization will lead to productivity in the place of work, and this generates a higher customer satisfaction and, absolutely, developments in services and profit in the organizations. Communication is very fundamental that no organization can exist effectively and profitably without it, particularly an employee relations practices. In present day dispensation, digital communication has been largely acknowledged as the life blood of any organization. The task of sustaining mutual understanding among interdependent groups such as individuals, organizations, communities and nations is not only limited by the negative consequences of conflicts but also because frequent conflicts weaken relationships and reputations, among other consequences. Since good understanding and enduring stakeholders' cooperation are highly prized by all social systems, conscientious efforts are sustained by the leadership of both social and organic societies to maintain greater stakeholders' cooperation through communication and genuine relations.

In the current information age, digital communication plays a crucial role in improving, teaching, learning, research and administrative processes. The use of digital communication tools in governance/administration can be referred to as e-governance/e-administration. With emergence of technology and growing demand of the society, e-administration is widely applied by the developed nations with no chance of a stopping point in the near future to better serve their citizens through efficient and effective services, with accountability and transparency. In developing countries, the adoption of digital communication tools in tertiary institutions is happening at a slow pace. Its use in administration is nothing to write home about. This has many reasons, from missing infrastructure to security concerns to lecturers not being familiar enough with using digital communication tools in regular classes. Most institutions are still running paper-based administration while others have deployed shallow automation of their administrative transactions. When appropriately applied, e–administration can effectively ensure the well-being of a university for improved and effective education and administration service delivery, conforming to regulations as per the university statutes and acts. Good deployment and sustainability of digital communication techniques in educational institution requires staff and students to be computer literate. The ICT-centre is responsible for the smooth running and management of the ICT facilities. Countries must establish the right policy interventions, resource investments, appropriate networks (partnerships) and enabling environment for the application of digital communication for employee relations to thrive. This work will serve as an excellent guide to stakeholders, University administrators, employee relations and the foundation for establishing a viable and sustainable ICT inspired learning and resource management. A

successful implementation of ICT enabled University administration will deliver information services 24 by 7 that strengthens University's drive towards effective administration, employees relations, increased transparency, and better management of resources. How this digital communication techniques have been deployed by management to create employee relations and trust will be the primary concern of this study. The thrust of this study is to examine the digital communication techniques and how they are utilized to enhance employee relations in universities in Rivers and Bayelsa States during Covid-19 lockdown.

Statement of the problem
The numerous impacts of Covid-19 pandemic are of research interest. The Covid-19 lockdown has shaken everybody's life, at work sphere, it has shaken the relationship to work, time, space and form for a large part of workers. During this Covid-19 lockdown, the universities in Rivers and Bayelsa States adopted working remotely, away from the traditional facilities to maintain a link to the office and employees. This involves telecommuting, working from home, teleworking, mobile work, flexi place, satellite office, detached units, distance meetings or virtual organizations. For employee relations, it helps productivity, profitability and flexibility and improvement in remote collaboration. Digital communication tools such as WhatsApp, Twitter, Facebook, Instagram were shown to enhance communication and access to information through networks such as intranet, internal and external platforms. It positively affect knowledge sharing which contribute to improving workers' skills and employee relations within teams and help reduce social isolation that can enhance employee relations, job satisfaction and productivity.

Nevertheless, the lack of cooperation and team spirit, decrease timeliness of work completion, risk of employees' cyber lacking, managerial, administrative problems to implement digital communication techniques for enhancement of employee activities are the challenges of teleworking or remote working during the Covid-19 lockdown. Also, various drawbacks like the increase in time pressure, workload, and a potential misuse of digital communication tools can generate information overload and be detrimental to employee relations. The various ways digital communication techniques are diffused on employee relations during the Covid-19 lockdown period remain largely unknown. Therefore, this study sets out to examine the digital communication and employee relations in selected universities in Rivers and Bayelsa States during Covid-19 lockdown.

Aim and objectives of the study
The aim of this study is to find out various ways digital communication techniques are utilised to enhance employee relations in university institutions in Rivers and Bayelsa states during Covid-19 lockdown. The specific objectives of the study were to:

1. Find out digital communication techniques used in each of the universities in Rivers and Bayelsa States during Covid-19 lockdown in employee relations,
2. Ascertain the ways digital communication techniques are deployed in employee relations activities in universities in Rivers and Bayelsa States during Covid-19 lockdown,

Research questions
This study was guided by the following questions:

1. What are digital communication techniques employed in each of the universities in Rivers and Bayelsa States during Covid-19 lockdown in employee relations?
2. In what ways are the digital communication techniques deployed in employee relations activities in universities in Rivers and Bayelsa States during Covid-19 lockdown?

Literature Review Digital Internal Communication

Since the mid-1990s there is a shift towards the use of internet-related technologies within internal communication. There is a different approach than before in the way top managers communicate with employees, which revolutionizes many organizations (Bussy, et al., 2013). With the increasing use of technologies within internal communication, organizations' knowledge of communication as a one-way and two-way communication process continues to grow further (Smith, 2015). As organizations adapt its internal communication to the digital communication tools, tremendous opportunities with employees emerges constantly. The digital internal communication facilitates two-way-messages, it allows feedback to be given and received (Lipiamen, et al., 2014). Technology changes the way managers and employees communicate with each other in many work structures within organizations. The new shift towards the use of technologies within communication creates endless opportunities (Mackenzie, 2010).

Employee Relations

Today, the business setup is changing in relation to the global pandemic of COVID-19. Human resource managers are persistently evolving innovative, creative, and effective ways to relate or engage the employees in a healthier way during this difficult time. Employee engagement is a workplace attitude that is ensuing all adherents of an organization to give of their excellence every day, committed toward their organization's goals and values. Kahn, 2010) describes in his study that engagement indicates physiological and physical existence of executing an organizational role. Psychological conditions of meaningfulness, safety, and availability are the three constructs that help engagement to develop in an organization. Further study suggests that in engagement, individuals employ and express themselves physically, cognitively, and emotionally in their role performances. The cognitive facet is associated with beliefs of leaders, employees, and working environments.

COVID-19

The severe respiratory disease recently appeared in Wuhan (Hubei province), China. Epidemiological examinations have suggested that the epidemic was related to a seafood market in Wuhan, China (Fan et al., 2020). COVID-19 is a pandemic that has already reached 5,934,936 confirmed cases globally, with at least 367,166 deaths as reported by the World Health Organization (WHO) as of May 31, 2020. In the European region, the total number of confirmed cases is 2,142,547 and 180,085 deaths reported. In regions of the Americas, confirmed cases are 2,743,793 and 157,702 deaths confirmed. In Eastern Mediterranean region, total number of confirmed cases is 505,001 and 12,353 deaths reported. In the Western Pacific region, it is 181,665 confirmed cases and 7,028 deaths reported. In South-East Asia region, confirmed cases are 260,579, and deaths are reported as 7,431. African region reported 100,610 confirmed cases and 2,554 deaths. World Health Organization risk assessment report states that COVID-19 is very high risk at the global level (WHO, 2020a). Those people who are living with NCDs (non-communicable diseases) are more susceptible to becoming seriously ill or dying from COVID-19 (WHO, 2020b).

2.2 Empirical Review

Bulinska-Stangrecka and Bagienska (2021) did a study on the role of employee relations in shaping job satisfaction as an element promoting positive mental health at work in the era of Covid-19. The purpose of the study is to examine what factors influence job satisfaction in the context of remote work caused by a pandemic. The investigation started with a literature review and then research hypotheses have been formulated. Based on an empirical study, carried out on a sample of 220 IT employees during the pandemic, an analysis of the mediating role of trust in links between employee relations and perceived job satisfaction was conducted. The study found that positive employee relations contribute to the level of job satisfaction. Additionally, trust is an important factor that mediates these relationships. Based on the results of the research, it was possible to describe the mechanism of shaping a supportive work environment during a pandemic.

Shamsi, et al (2021) carried out a study on employees' work-related well-being has become one of the most significant interests of researchers and organizations due to the COVID-19 pandemic. This study examines how job characteristics such as mental load and team support, and technology-related factors such as perceived ease of use, perceived usefulness, and technology acceptance, impact employees' work engagement as a dimension of work well-being. Data were collected through a sample of 610 academic employees from three Norwegian universities after COVID-19 restrictions were implemented. The structural model estimation showed that mental load, perceived team support, and technology acceptance were significantly related to work engagement. By doing so, the study contributed to the existing literature by demonstrating how remote working with the use of newly implemented technologies can be related to employees' well-being during a pandemic.

Theoretical frameworks
The study derived its theoretical framework from the system theory and technological determinism theory.

System Theory
General systems theory was coined in the year 1940s by Ludwig von Bertalanffy, who sought a new approach to the study of living systems. Bertalanffy developed the theory through lectures beginning in 1937 and then though publications beginning in 1946. He is generally regarded as the father of the systems theory. The system theory is said to be one of the contemporary approaches to organizational communication. It sees an organization as a system (made up of subsystems) within a larger or super system (that is the larger society). The theory therefore focuses on issues of synergy, interdependently and interconnections within an organization and between the organization and the danger environment (Laszlo & Krippner, 2013). The system theory (like the situation theory) has been described as a theory of relationship as it gives us a way of thinking about relationships (Rakeshkr, 2011) within organizations and between organizations and their larger environment, such relationships can be initiated and managed through effective internal communication. This means that communication mechanisms must be in place for the organizational system to exchange relevant information within and with its environment. It is the duty of the management to monitor relationships within and outside organizations. This duty is called boundary spanning.

Von Bertalanffy (2016) defines a system as *a complex of interacting elements*. Von Bertalanffy fosters systems thinking in all disciplines in order to find general principles valid to all systems. It introduces "system" as a new scientific paradigm contrasting the analytical, mechanical paradigm, characterizing classical science (Von Bertalanffy, 2010). A fundamental notion of general systems theory is its focus on interactions. The centre in relationships leads to sustain that the behaviour of a single autonomous element is different from its behaviour when the element interacts with other elements. Another core tenet is the distinction between open, closed and isolated systems. In open systems there are exchanges of energy, matter, people, and information with the external environment. In closed systems there are no exchanges of information and matter, just exchanges of energy. In isolated system there is no exchange of elements. Building on general systems theory many approaches developed. Relating this theory to the study, the theory holds that organizations have recognizable boundaries within which there must be a digital communication techniques that guides the practices of the organization (universities) to achieve employee relations. According to the theory, the onus lies on the management of the organization to create and maintain these digital communication techniques structures. This employee relations may refer to an effective management communication practice established by organizations.

Technological Determinism Theory
This theory was propounded by Marshall McLuhan in 1962. The individual interpretation according to McLuhan (1962) is that we learn and feel and think the way we do because of the messages we receive through the current technology. That is available. The radio required us to only listen and develop our sense

of hearing on the other hand, television engages both our hearing and visual senses. We then transfer those developed senses into our everyday lives and we want to use them again. The medium is then or message.

This theory aimed at drawing attention to the portent strength of digital communication technologies. This theory regards the wider dimension of information craze in the society, as a result of the information explosion fostered by digital era. It is therefore safe to assume that the social, historical, economic and cultural changes occurring in human society today, could be linked to the invention and development of new technologies. The medium, which the theory emphasizes, has gone ahead to prove that digital technologies are turning the world and by extension organization like University institutions into an interactive forum (Odoemelam & Adibe, 2011). The physical planet earth, it is a system which, using basic telephony and broadcasting principles, allows messages, sounds, film picture and text to be transmitted simultaneously or simply from one computer anywhere in the world to another or from organizations to its employees.

Methodology
The research design adopted for this study was descriptive survey method. The population of the study involves people or subject about which a researcher needs information. The population of this study consisted 20,605 of the management and staff (employees) of University of Port Harcourt (Uniport), Rivers State University (RSU), Federal University, Otuoke (FUO) and Niger Delta University, Amasoma (NDU) (The Office of the Registrar of each of the institutions, 2022). A total of 380 respondents formed the sample size for this study through Keyton's sampling table and the study adopted the multi-stage sampling technique. The instrument for data collection was the questionnaire and the questionnaire was administered on management and staff (employees) of the universities in Rivers and Bayelsa states in offices. Data obtained with the questionnaire were analyzed quantitatively in statistical tables using the weighted mean score based on a four-point Likert scale.

Results and Discussion
Research Question 1: What are digital communication techniques employed in each of the universities in Rivers and Bayelsa States during Covid-19 lockdown in employee relations?

Table 1: Mean, Standard Deviation and Rank Order Statistics of the Digital Communication employed in each University under Study during Covid-19 Lockdown in Rivers and Bayelsa States

S/N	Items	SD	A	D	SD	$\bar{x}$	StD	Rank	Remark
1.	My institution adopts digital remarks which are friendly, positive and appropriate for employee relations during Covid-19 lockdown	200 (800)	164 (492)	10 (20)	0 (0)	3.50	0.8	1st	Accepted
2.	My institution embraces in asynchronous communication that helps employees balance the demands of works during Covid-19 lockdown	160 (640)	204 (612)	6 (12)	4 (4)	3.39	0.82	4th	Accepted
3.	My institution keeps communication consistence for employees during Covid-19 lockdown	180 (720)	190 (570)	4 (8)	0 (0)	3.47	0.89	2nd	Accepted
4.	My institution promotes clarity and brevity to help	160	184	20	10				

S/N	Items	SA	A	D	SD	$\bar{x}$	StD	Rank	Remark
	prevent misunderstanding of message to employee during Covid-19 lockdown	(640)	(552)	(40)	(10)	3.32	0.93	6th	Accepted
5.	My institution empowers employees to make every message count during Covid-19 lockdown	150 (600)	220 (660)	10 (20)	0 (0)	3.42	0.69	3rd	Accepted
6.	My institution ensures power of precise communication which is key to employee relation activities success during Covid-19 lockdown	120 (480)	250 (750)	4 (8)	0 (0)	3.31	0.66	7th	Accepted
7.	My institution provides continuous communication quality by building skills through regular practice during Covid-19 lockdown	130 (520)	240 (720)	4 (8)	0 (0)	3.33	0.6	5th	Accepted
	Grand Mean					**3.39**			**Accepted**

Table 1 above showed that digital remarks, asynchronous communication, communication consistent, clarity and brevity, making every message count, precise communication and continuous communication quality were the digital communication techniques employed in each universities under study during Covid-19 lockdown in Rivers and Bayelsa States.

Research Question 2: In what ways are the digital communication techniques deployed in employee relations activities in universities in Rivers and Bayelsa States during Covid-19 lockdown?

Table 2: Mean, Standard Deviation and Rank Order Statistics of the Ways Digital Communication Techniques deployed in Employee Relations Activities during Covid-19 Lockdown in Rivers and Bayelsa States

S/N	Items	SA	A	D	SD	$\bar{x}$	StD	Rank	Remark
8.	In my institution digital communication techniques were more interactive, participatory, egalitarian, decentralized and less hierarchical	170 (680)	204 (612)	0 (0)	0 (0)	3.45	0.5	3rd	Accepted
9.	My institution provided a unified communication platform such as email, WhatsApp, etc	170 (680)	194 (582)	10 (20)	0 (0)	3.42	0.89	5th	Accepted
10.	My institution had a productive online meetings via zoom and video conferencing	190 (760)	180 (540)	0 (0)	4 (4)	3.48	0.94	2nd	Accepted
11.	In my institution, there were give and receive feedbacks	170 (680)	190 (570)	13 (26)	2 (2)	3.41	0.99	6th	Accepted

12.	In my institution, there were diversity of available digital channels	210 (840)	160 (480)	4 (8)	0 (0)	3.55	0.67	1st Accepted
13.	In my institution, urgent notifications were reserved for only the most time-sensitive information	170 (680)	200 (600)	0 (0)	4 (4)	3.43	0.88	4th Accepted
	Grand Mean					**3.45**		**Accepted**

Table 2 above indicated that the ways digital communication techniques were deployed in employee relations activities during Covid-19 lockdown in institutions in Rivers and Bayelsa States were more interactive, participatory, egalitarian, decentralized, less hierarchical, give and receive feedbacks, a productive online meetings via zoom and video conferencing, a unified communication platform such as email, WhatsApp etc, diversity of available digital channels, and reserved for only the most time-sensitive information.

Discussion of Findings

The data analysed in tables 1 to 2 provided the platform for this discussion which was purely done in relation to the research objectives and questions. Each of the tables handled and addressed a given research question.

Research question 1: What are digital communication techniques employed in each of the universities in Rivers and Bayelsa States during Covid-19 lockdown in employee relations?

The result revealed that digital remarks, asynchronous communication, communication consistent, clarity and brevity, making every message count, precise communication and continuous communication quality were the digital communication techniques employed in each universities under study during Covid-19 lockdown in Rivers and Bayelsa States. This corroborates the tenet of system theory upon which this study was anchored as it emphasised that organizations have recognizable boundaries within which there must be a digital communication techniques that guild the practices of organization (universities) to achieve employee relations during tough times like Covid-19 lockdown. Also, the finding supports the view of Jones and Kober (2019) as elicited that digital communication strategies relate to how to achieve superior employee engagement in difficult times such as Covid-19 lockdown and higher business results. These strategies are stay centred on your core values-it encourages employee engagement in difficult times. Explicitly support employee-so they remain motivated during tough times.

Research question 2:

In what ways are the digital communication techniques deployed in employee relations activities in universities in Rivers and Bayelsa States during Covid-19 lockdown?

The finding revealed that the ways digital communication techniques were deployed in employee relations activities during Covid-19 lockdown in institutions in Rivers and Bayelsa States were more interactive, participatory, egalitarian, decentralized, less hierarchical, give and receive feedbacks, a productive online meetings via zoom and video conferencing, a unified communication platform such as email, WhatsApp etc, diversity of available digital channels, reserved for only the most time-sensitive information, etc. In the same wave, Odoemelam and Adibe (2011) buttressed that the medium, which the theory of technological determinism emphasized, has gone ahead to prove that digital technologies are turning the world and by extension organization like tertiary institutions into an interactive forum. Also, Lipiainen et al. (2014) pointed out that as organizations adapt its internal communication to digital communication tools, tremendous opportunities with employees emerges constantly. The digital internal communication facilitates two-way-message, it allows feedback to be given and received.

Conclusions

The study concluded that there is a significant ways digital communication deployed influenced employee relations activities in universities in Rivers and Bayelsa States during Covid-19 lockdown; that there is significant benefits derived from digital communication techniques on employee relations activities in universities in Rivers and Bayelsa States during Covid-19 lockdown; and that there is significant challenges in the use of digital communication techniques on employee relations activities in Rivers and Bayelsa States during Covid-19 lockdown.

Also, based on the findings, the study concluded that digital communication techniques such as digital remarks, asynchronous communication, communication consistent, clarity and brevity, making every message count, and continuous communication quality building skills can help tertiary institutions prevent misunderstanding in employee relations, balance the demands of works and enhance employee relation activities success during tough times or in any tight situations. Technology is integral to employees' connection and communication especially in moment of quarantines and lockdown as a result of health crises and other emergencies. Therefore, the way digital communication techniques are deploy in tertiary institutions becomes paramount. Based on this, the study concluded that digital communication techniques should be more interactive, participatory, egalitarian, decentralised and less hierarchical.

Recommendations

Based on the result of the study discussed above, the researcher therefore, came up with the following recommendations:

1. That the Universities should ensure strict compliance to digital communication techniques such as digital remarks, clarity and brevity, asynchronous communication etc which are positive and appropriate for employee relations during tough time.
2. The federal and state government should articulate a policy to integrate ICT into the mainstream of tertiary institution workplace and administration. This is to ensure a unified communication platform such as email, WhatsApp etc

References

Bulinska-Stangrecka, H. & Bagienska, A. (2021). The role of employee relations in shaping job satisfaction as an element promoting positive mental health at work in the era of Covid-19. *International Journal of Environmental Research Public Health*, 18 (4), 1903 – 1918.

Bussy, N. M., Ewing, M. T. & Pitt, L. F. (2003). Stakeholder theory and internal marketing communications: a framework for analysing the influence of new media. *Journal of Marketing Communication,* 9 (3), 147-161.

Fan, W. Zhao, S., Bin, Y., Chen, Y. M, Wang, W., Song, Z. G., & Yi, H. (2020). A new Coronavirus associated with human respiratory disease in China. Nature, 579, 265 – 269.

Jones, M. D. & Kober, J. J. (2019). Employee engagement in difficult times. World Class enchmarking. http://worldclassbenchmarking.com/employee-engagement-in-difficult-times.

Kahn, W. A. (2010). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal* 33, 692-724

Laszlo, A. & Krippners, S. (2013). Systems theories: Their origins, foundations and development. Elservier Science.

Lipiainen, H. S. M, Karjaluoto, H. E., & Nevalainen, M. (2014). Digital channels in the internal communication of a multinational corporation. *An International Journal, 19* (3), 275–286.

Mackenzie, M.L. (2010). Manager communication and workplace trust: Understanding manager and employee perceptions in the e-world. *International Journal of Information Management,* 30 (6). 529-541.

McLuhan, M. H. (1964). Understanding media: The extension of man. McGraw-Hill.

Odoemelan, C. & Adibe, K. (2011). Political conflicts and political communication in Africa: An analysis of social media role. Paper for the ACCE, Sept. 2011

Shamsi, M., Iakovleva, T., Olsen, E. & Bagozzi, R. P. (2021). Employees' work-related well-being during Covid-19 pandemic: An integrated perspective of technology acceptance model and JD-R theory. *International Journal of Environmental Research and Public Health.* 18, 11888. https://doi.org/10.3390/ijerp182211888.

Smith, L. (2005). *Effective Internal Communication*. Kogan Page Limited.

Von Bertalanffy, L. (2010). General system theory: Foundations, development, applications. George Braziller.

World Health Organization. (2020a). Situation report – 101, Coronavirus disease 2019 (Covvid-19). https://www.who.int/docs/default-source/coronavirus/situation-reports/20200430-sitrep-101-covid-19.pdf.

World Health Organization. (2020b). Situation report – 132, Coronavirus disease 2019 (Covvid-19). https://www.who.int/docs/default-source/coronavirus/situation-reports/20200430-sitrep-101-covid-19.pdf.