

Article

Resilience During Crisis: COVID-19 and the New Age of Remote Work in Higher Education—A Systematic Literature Review

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Abstract: The outbreak of the COVID-19 pandemic took a sledgehammer to the education sector, shattering the established structured systems, norms and rituals of practices and procedures. To ensure continuity whilst adhering to the pandemic-induced containment measures, higher education institutions adopted a remote work model to address the needs of a dispersed workforce. Amidst the uncertainty and continuous changes posed by the pandemic, remote working arrangements gradually dominated the higher education workspace, thereby increasing demands on institutions and employees. Consequently, the notion of resilience as a crucial constituent of Crisis Management has never been more salient. Yet surprisingly, there has been a paucity of literature in this domain. Whilst research on resilience is gaining interest, there is a need for a comprehensive overview of what the concept means for academics during an emergency and its application in the Crisis Management framework. This article addresses this research gap using a systematic Literature Review method to unearth the current state of scientific research regarding resilience in Crisis Management in the context of remote work during COVID-19. The findings of the study provide a research agenda that centers on understanding how resilience in Crisis Management and its strategic use in remote work can advance the research streams.

Keywords: COVID-19; resilience; Crisis Management; remote work; higher education



Received: 8 February 2025

Revised: 3 March 2025

Accepted: 6 March 2025

Published: 9 March 2025

Citation: Okeke-Uzodike, O. E., & Ngo Henha, E. P. (2025). Resilience During Crisis: COVID-19 and the New Age of Remote Work in Higher Education—A Systematic Literature Review. *Administrative Sciences*, 15(3), 92. <https://doi.org/10.3390/admsci15030092>

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1. Introduction and Background

The outbreak of the coronavirus pandemic (COVID-19) is considered one of the most significant and unpredictable global crises in recent times, leading to government shutdowns of various economic activities. Kniffin et al. (2021) note that the pandemic pushed millions of workers away from their traditional office spaces, leading to a de facto global experiment on remote working, a work arrangement that workers had no prior experience of, nor organizations prepared for (Wang et al., 2020). This accelerated the workplace experiment that had struggled to gain traction before the outbreak of COVID-19 (McKinsey & Company, 2020). The pandemic and its control measures caused the biggest shockwaves and set in motion waves of change in the education system. McNamara (2021) noted that the long-term impact of this change could likely echo through academic cycles, posing greater challenges for academics. Due to the complexity of the academic environment, the transition requires new processes of transformation to bring about the profound necessary changes. Fernandez and Shaw (2020) assert that the rapidity of the transition to remote learning was a response that came counter to the perception that changes in academia occur only at glacial speed. Academics had to embrace the model

of remote work and shift their pedagogical approach to suit the new market conditions. The transition demands changes in attitudes, values and beliefs and requires a complete turnaround from the traditional way of doing things (AbuJarour et al., 2021). Many academics grappled with the challenges of remote working with regard to teaching and learning, research, mentoring and other support activities.

These developments challenged the education system's full return to its state prior to the pandemic, becoming increasingly diaphanous. The dynamic nature of the human environment has made managing crises a common component, and resilience to ensure business continuity becomes optimal. The resilience of education systems is important for institutions to better cope in a crisis, thus making research in this space a prominent concept in the lexicon of Crisis Management. Extant studies have not paid much attention to the broad range of contexts in which the concept of resilience has developed and is being applied, making resilience research in management fragmented. A vast corpus of literature on resilience exists across disciplines addressing disasters, stress and trauma. Focusing on the Higher Education sector during the COVID-19 pandemic, most research studies failed to address resilience and remote work in tandem, given that the latter dominated the academic space. Little is known about the discussion of the links between the resilience of academics in remote work settings during the pandemic and its integration across a Crisis Management framework. In response to the paucity of research in this space, this article joins the discourse and contributes to this promising research area by attempting to address the following objectives:

- i. To understand the resilience of academics in remote working arrangements during the COVID-19 pandemic; and
- ii. To explore the application of resilience across the stages of a Crisis Management framework in addressing the challenges of remote working arrangements.

This article is organized as follows: the next section is a review of the literature on crisis, remote work and resilience. Thereafter, the authors describe the methodology; discuss the typology of the systematic literature review; detail the procedure adopted and the findings of the study. The last section concludes the article, proffers recommendations and highlights the limitations of the study.

2. Literature Review: Crisis, Remote Work and Resilience

'Crisis' is a term often used interchangeably to denote situations such as disasters, business interruptions, catastrophes and emergencies (Herbane, 2010). It is a progressive process that may not be restricted to one area within a common border and comprises three common elements, namely threat, surprise and short decision times (Mikušová & Horváthová, 2019). Crises are characterized as rare, significant, high impact, ambiguous, urgent, and involve high stakes (Simola, 2014). The concept also entails a period of discontinuity in which the system's core values are under threat, bringing about a destabilizing effect on the organization and requiring critical decision-making (Zamoum & Gorpe, 2018; Kayes et al., 2012). Reflecting on the key points above, the authors of this article adopted Hollier et al.'s (2020) definition of a "crisis" as a situation involving an urgent threat to core values and life-sustaining systems that requires an urgent response under conditions of significant uncertainty. This definition captures the true nature of the COVID-19 pandemic, with the World Health Organization declaring it a pandemic due to its rapid spread, posing a threat to human health, social and economic activities.

The pandemic exerted an abrupt and absolute impact on people's lives, forcing many organizations, including Higher Education Institutions, to resort to remote work. The concept entails a flexible working arrangement that allows tasks to be carried out outside of the traditional office space. The nature of such working arrangements has attracted

a mixed debate amongst scholars arguing for or against it. For some scholars, remote work enabled academics to adapt to the changes; reduce stress; remain productive; have a sense of autonomy; manage work; and control work schedules and life balance (Eaton, 2020; Ali et al., 2021), hence purporting that some academics worked efficiently remotely during the pandemic (Aczel et al., 2021). Contrarily, other studies found increased stress affecting academics (Dumulescu & Mutiu, 2021; Fernandez & Shaw, 2020); academic job requirements being not fully compatible with remote work (Avdiu & Nayyar, 2020); and non-availability or availability, with the sharing of lap-tops and internet provision (Hedding et al., 2020). Some studies found challenges in the digital divide, social inequalities, political issues, and the inappropriate administration of remote teaching facing academics (Jili et al., 2021; Czerniewicz, 2020). Furthermore, many institutions lacked the technological infrastructure needed to fully operate; and the necessary skills required for academics to work remotely (Whalen, 2020; Jili et al., 2021). Hence, resilience gained considerable attention given the uncertainties posed by the COVID-19 pandemic for HEIs.

Resilience, which is rooted in the field of Developmental Psychology, has become a prominent concept across various disciplines but is still relatively new in education (Alhawsawi et al., 2023). Ostensibly, resilience is a complex term defined from various standpoints and, depending on the nature of the research, could have different meanings. Although an umbrella term, Allen et al. (2021) defined resilience as the ability to adapt and recover from adversity. It emphasizes adaptability and the process of promoting recovery in an emergency. Aitken-Fox et al. (2023) noted that the focus is on identifying how individuals can be resilient; how organizations can develop the capabilities needed to be resilient; and what those capabilities are. The pandemic served as a phenomenal change event, a wake-up call to the education fraternity (Raghunathan et al., 2022), exposing the universal vulnerabilities of academic institutions and calling for a flexible and more resilient education system (Ali, 2020). The concept became very important, needing HEIs and academics to embrace it knowingly or unknowingly to ensure continuity. Hence, resilience in the context of COVID-19 remote work entails the ability of academics and institutions (environment and processes) to cope and prosper in the face of these changes.

3. Theoretical Expositions on Crisis and Resilience Management

The two critical features of the crisis lie in managing it (*Crisis Management*) by recognizing the adverse effect on institutions and developing adaptable models and practices to ensure continuity (*resilience*). Crisis Management (CM) entails “a process by which an organization deals with a disruptive and unexpected event that threatens to harm the organization, its stakeholders or the general public” (Bundy et al., 2017). Park (2021) added that Crisis Management encompasses the available processes in place at individual, organizational or country levels for addressing any unforeseen circumstances that may have adverse effects on operations and outcomes. Considerably, the COVID-19 pandemic tremendously and harmfully affected society at large. The institutional guidelines to prepare and respond to such unforeseen circumstances or catastrophes reflect a Crisis Management Plan (CMP).

A CMP mostly relies on the functions of planning, controlling and detailing the description of the roles and responsibilities of various functional levels (Izumi et al., 2021). Coombs (2012) notes that Crisis Management involves a process, and its effectiveness relies on its ability to handle the anticipated threats sequentially. Generally, a Crisis Management framework involves the phases of pre-crisis (mitigation and preparation), crisis response (actions activated to address the crisis) and post-crisis (recovery). Each of these phases comprises various steps and actions that need to be in place to assess and understand the factors contributing to the uncertain situation (Ozili, 2020; Venkatesh et al., 2019). Understanding the need for institutions to survive in such uncertain environments and to

foster future success, [Duchek \(2020\)](#) proposes a 3-stage Resilience Model, which includes anticipation (observation and identification—describes the preventative aspects relative to a crisis), coping (accepting the crisis, developing and implementing the necessary solutions) and adaptation (reflecting and learning from experience). This three-phase crisis and resilience framework plays out well in managing the COVID-19-induced remote work challenges for academics.

4. Materials and Methods

The study adopted a systematic literature review (SLR) methodology because of its high level of evidence as shown across disciplines. [Fink \(2019, p. 6\)](#) describes a systematic literature review as “a systematic, explicit [comprehensive] and reproducible method for identifying, evaluating and synthesizing the existing body of completed and recorded work produced by researchers, scholars and practitioners”. Reviewing current literature allows for an understanding of the breadth of COVID-19 research conducted and published in relation to resilience and remote work in the HEI. In this context, SLR helps to map and assess the extant knowledge and gaps on specific issues ([Mengist et al., 2019](#)), as well as providing the current challenges and future directions. For [Okoli \(2015\)](#), SLR follows a methodological approach in which procedures for conducting the research are explained, whereby a comprehensive search is conducted within the scope, and it is reproducible by other researchers. A typical SLR consists of three broad phases of planning, conducting and reporting, which require the researcher to identify, select primary studies, extract, analyze and synthesize data from publications. Given no consensus on the number of steps in an SLR, this article adopts [Barroso and Laborda’s \(2022\)](#) five-step methodological framework as shown in Figure 1.

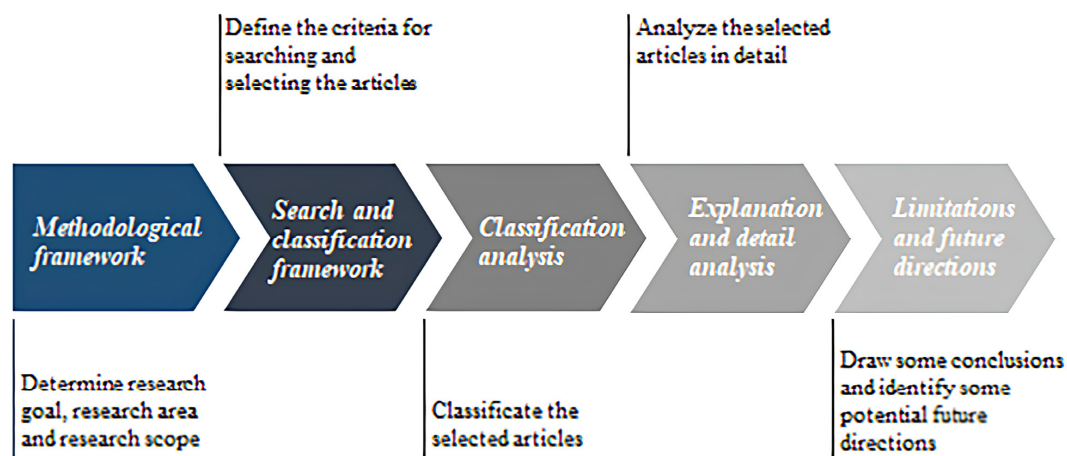


Figure 1. SLR methodological framework. Source: [Barroso and Laborda \(2022\)](#).

4.1. Methodological Protocol Phase 1—Planning: This Covers the Steps in Identifying and Selecting Primary Studies

Step 1: Identification of the research goal, area and scope

The researchers set the key direction of the analysis by identifying the goal, area and scope of the study. Hence, the goal of the research is to conceptualize resilience in the context of remote work within the Higher Education sector and understand how it can be applied across the phases of a Crisis Management framework in a pandemic situation. The research area focusses on academic literature covering resilience and remote work during the COVID-19 pandemic, specifically within a higher education context. This scope is set to ensure that the most relevant publications are selected and critically analyzed to capture the available information within the research space.

Step 2: Selection criteria and search

The second step entails identifying the relevant bibliographic databases and criteria for selecting academic papers addressing the research aim. The researchers considered documents indexed in four databases, namely Web of Science (WoS), SCOPUS, ScienceDirect and Google Scholar. The pilot search showed a dearth of literature in the research area, thus there was a need to use more databases for a wider search. In addition, these databases publish high-quality academic works and form a large source of research in the field of social sciences. Following protocols, the researchers applied an advanced search using all combinations of the keywords as set out in Table 1.

Table 1. Search terms and criteria.

Line 1 (Search Term)	“Resilience” and “Remote work”
Line 2 (Search Term)	“COVID-19” or “COVID-19 Pandemic”
Line 3 (Period)	and “Higher Education”
	“January 2020–April 2023”

Source: Authors concept.

4.2. Methodological Protocol Phase 2—Conducting

Step 3: Search and classification framework

This step allows researchers to filter, classify and select data. Using the keywords, ($n = 256$) articles were retrieved and extensively examined to ensure relevance to the objectives of the study, thereby limiting bias at the end of the analysis. With the help of EndNote version 20, duplicated items ($n = 43$) were carefully removed since databases often publish the same articles. Filtering and screening the titles and abstracts resulted in removing $n = 179$ records. Applying other inclusion and exclusion measures, the researchers considered only peer-reviewed journal articles published between 2020 and 2023. This is because journals validate recent knowledge in the field, and this timeframe saw a rise in remote work within HEIs. Also included in this study are full-text articles published in the English language across the field of social sciences but within the subject area. Excluded from the analysis are non-peer-reviewed publications (editorials, commentaries, dissertations, theses, book chapters, as well as articles without access to the full text). Hence, purified records of full-text articles meeting eligibility criteria resulted in $n = 11$ being singled out for analysis, as depicted in Figure 2 below.

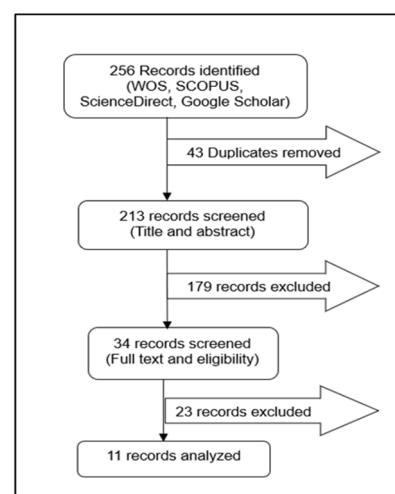


Figure 2. Flowchart for data selection. Authors concept: Literature search and study selection.

4.3. Methodological Protocol Phase 3—Reporting

The last phase of the SLR framework entails analysis and drawing limitations and future directions.

Step 4: Data Analysis and Discussion

Objective: Resilience of academics in remote working arrangements during COVID-19.

In Table 2 below, the researchers present a summary of academic papers analyzed. These academic papers were carefully selected, focusing on the entirety of the study and, most importantly, the methodology applied.

Table 2. Selected academic papers.

Authors (Year)	Title	Purpose	Keywords	Methodology	Findings (Themes)
Alhawsawi et al. (2023)	Understanding resilience and coping in a digitally transformed educational environment during COVID-19	Influence of contextual factors on teachers' resilience.	Academics, Resilience COVID-19	Mixed qualitative and qualitative case study	Individual resilience strategies helped teachers to cope with the COVID-19 associated challenges.
Bozkurt (2022)	Resilience, adaptability, and sustainability of higher education: A systematic mapping study on the impact of the coronavirus (COVID-19) pandemic and the transition to the new normal	Examination of COVID-19 from the perspective of higher education	HEI Resilience COVID-19	Systematic review and bibliometric analysis methods	Survival of higher education depends on the resilience, adaptability and sustainability skills of higher education institutions
Arranz et al. (2022)	Promoting lab culture to enhance academic resilience during crises.	Illustrates the essentials of promoting lab culture in transitioning from in-person to a remote lab environment.	Academics Remote work Resilience COVID-19	Qualitative	Proactive promotion of lab culture fosters academic resilience during crises.

Table 2. Cont.

Authors (Year)	Title	Purpose	Keywords	Methodology	Findings (Themes)
de los Reyes et al. (2022)	Resilience of higher education academics in the time of 21st century pandemics: A narrative review	Examines the resilience of academics in higher education.	HEI Academics Resilience	Narrative literature review	Academic resilience is a dynamic interaction between academics and their environments. Academics demonstrate their resilience through willingness to make changes, working in creative ways and achieving positive outcomes despite, at times, insufficient resources.
Procentese et al. (2022)	Teachers' efficacy in the face of emergency remote teaching during COVID-19 pandemic: The protective role of personal resilience and sense of responsible togetherness	Examines teachers' personal resilience and sense of responsible togetherness as factors supporting their work-related efficacy	Academics Remote work Resilience	Qualitative	Positive association between personal resilience and sense of responsible togetherness.
Shaya et al. (2022)	Organizational resilience of higher education institutions: An empirical study during COVID-19 pandemic.	Explores and expand a theoretical model on organizational capabilities that constitute organizational resilience.	HEI Resilience	Qualitative	Stages of organizational resilience are anticipation, coping and adaptation. Key antecedents for survival are knowledge, resources availability, social resources, power relationships and innovative culture. Two main moderators are crisis leadership traits and employee resilience.

Table 2. Cont.

Authors (Year)	Title	Purpose	Keywords	Methodology	Findings (Themes)
Bento et al. (2021)	Resilience in higher education: A complex perspective to lecturers' adaptive processes in response to the COVID-19 pandemic	Investigates the experience of lecturers in a university college in Brazil in the initial months of the COVID-19 pandemic	HEI Academics Resilience	Qualitative	Lecturers' adaptive processes during COVID-19 emanated from individual resilience elements. Open communication channel enhances the system-level resilience.
Delgado-Gallegos et al. (2021)	Teaching anxiety, stress and resilience during the COVID-19 pandemic: Evaluating the vulnerability of academic professionals in Mexico through the adapted COVID-19 stress scales.	Evaluates the vulnerability and adaptability of the academic professionals in Mexico	Academics Remote work COVID-19 Resilience	Quantitative	Academic professionals use of individual resilience during the process of transformation in education system and adapting and coping with stress during quarantine.
Mäkinen et al. (2021)	Loneliness and well-being during the COVID-19 pandemic: The moderating roles of personal, social and organizational resources on perceived stress and exhaustion among Finnish University employees.	Examines university employees' experiences of remote work during the COVID-19 pandemic.	HEI Remote work COVID-19 Resilience	Quantitative study	Personal resilience coping strategies and organizational support enhances well-being in organizations during the COVID-19 pandemic.
Ahn et al. (2021)	Academic caregivers on organizational and community resilience in academia (fuk individual resilience)	Explores institutional levels of support for academics during periods of crisis.	Quantitative	Systematic literature	Shifting away from individual approaches to resilience, building organizational and community resilience in academia will help withstand future crises and build sustainable academia.
Nandy et al. (2021)	Lessons from COVID-19 and a resilience model for higher education	Continuity of HEI activities in/post COVID-19.	HEI Resilience COVID-19	Systematic literature	Resilience model can be applied at both individual and institutional levels in rebuilding the system.

5. Results and Discussion

The discussion for this research objective concentrates on the final analysis of 11 papers addressing the study keywords. Data from Table 2 show that the resilience of academics in the context of remote work during COVID-19 emerged at individual and organizational levels. This finding resonates well with scholars' assertions on resilience being an attribute of an individual (Southwick et al., 2016; McAllister, 2013; Truffino, 2010). The idea is further stressed in Walker et al.'s (2017) definition of resilience as the mental reservoir of strength that helps people handle stress and hardship. This is based on the premise that resilient people draw on their mental strength to cope with and recover from traumatic challenges. Hence, individual resilience refers to one's ability to maintain a stable level of functioning following traumatic events (Bonanno, 2005), or the ability of individuals placed in adverse circumstances to "get by" and still lead a satisfactory life (Michaud, 1999). Kimhi (2016) added that one's level of resilience is vital in shielding the negative psychological consequences of a traumatic event. This involves individual behaviors, thoughts and actions that promote personal and mental wellbeing. In the case of the COVID-19 pandemic and its associated intense remote work, the ability of academics to navigate challenges became optimal. This explains the findings on why the use of individual resilience dominates across the reviewed papers in this article (Alhawsawi et al., 2023; de los Reyes et al., 2022; Procentese et al., 2022; Bento et al., 2021; Delgado-Gallegos et al., 2021).

A major resource for individual resilience is a sense of coherence (SOC), which comprises three elements, namely a sense of meaningfulness (i.e., the extent to which individuals perceive life as worthy of commitment and engagement); comprehensibility (i.e., the extent to which individuals perceive events as structured, consistent and clear); and manageability (i.e., the extent to which individuals believe that their external or internal resources are adequate to face stressful events) (Barni et al., 2020; Kimhi, 2016). As evidenced in various studies, Danioni et al. (2021) demonstrated in their study how the elements of SOC helped individuals cope with stressors during the COVID-19 pandemic lockdown. Another study by Zewude et al. (2023) found that SOC and resilience positively predict teachers' well-being and act as mediators between COVID-19 stress and teachers' well-being. Simply put, SOC as well as resilience helped to lower COVID-19 stress levels amongst the sampled teachers. Furthermore, de los Reyes et al. (2022) highlighted in their study how resilience reflects a dynamic interaction between academics and their environments; hence, academics demonstrated their resilience through their willingness to make changes, work in creative ways and achieve positive outcomes despite having insufficient resources at times. Mahat et al.'s (2022) study found that academics showed sustained engagement despite the need to overcome the continuing changes and uncertainties during the COVID-19 era and remote work. Hence, there is an indication that academics were able to assess and understand the situation (comprehensibility of COVID-19 and remote work) and manage scarce resources (manageability) and showed commitment and engagement to move in a health-promoting direction (meaningfulness).

The data also revealed that academic resilience during COVID-19 remote working arrangements emerged at an organizational level (Bozkurt, 2022; Ahn et al., 2021). Organizational resilience refers to the organization's capability to anticipate possible risks, successfully cope with unexpected events and learn and adapt to changing situations aimed at promoting organizational transformation (Duchek, 2020). This definition highlights the importance of capability, and Duchek (2020) stated that the capabilities of employees contribute to an organization's capability to be resilient. The ability to be resilient comes from the process, strategy, outcome and behavior that define the organization. Accordingly, resilience is conceptualized as a personal resource that encourages adequate adaptation

to significant traumatic events (Mäkineniemi et al., 2021; Smith et al., 2008, 2010). As a positive internal resource, individual resilience can be collectively and effectively managed to produce a positive personality that drives organizational outcomes. Hence, individual resilience is considered the main source of organizational resilience. In the context of this paper, resilient academics, fully supported by the institutions, could collectively and actively respond to and react positively to adversity, which in turn fosters survival. Ahn et al.'s (2021) study, which explores institutional levels of support for academics during COVID-19, highlighted the need to build organizational and community resilience in academia to help withstand future crises and build sustainable academia. Similar studies in this domain show how developing organizational resilience has helped institutions cope during the COVID-19 crisis and the associated remote work (Bartusevičienė et al., 2021; Brown et al., 2021). It is noteworthy that organizational resilience is an important factor capable of ensuring the effectiveness of the crisis response. This is because resilient organizations develop a broad and diverse knowledge base to cope with unexpected events (Duchek, 2020), thereby driving desirable performance in a turbulent environment.

The COVID-19 pandemic exposed HEIs and academics to abrupt unprecedented disruptions. These findings show the collective importance of individual and institutional resilience for an effective crisis response in a pandemic. In such situations, individuals become more innovative in exploring coping and survival strategies, and those with strong resilience are likely to overcome and manage the pandemic situation. Such individuals collectively can thrive, rebound and help the institution build capability to manage crises.

5.1. Resilience in the Crisis Management Life-Cycle

Duchek (2020) concurs that academic discussions about the dynamic nature of resilience in coping with crises is scant, hence the adoption of a narrative literature review procedure. In addition, research on academic resilience in the context of remote work is emerging, especially following the COVID-19 pandemic. Resilience is embedded in a dynamic process that is needed to sustain institutions during a crisis. It can be viewed from process and static theoretical perspectives (Jiang et al., 2021). These authors note that the process view of resilience enhances understanding of the dynamic and continuous monitoring of a crisis over time. Arguably, resilience gradually develops with different elements in a Crisis Management cycle, creating the ongoing and cyclical processes (McManus et al., 2008) needed to prepare for future crises and to ensure a continuous process. As noted earlier, a Crisis Management life cycle involves pre-crisis, crisis response and post-crisis stages, while resilience involves stages of anticipation, coping and adaptation. Hence, the current discussion is on aligning resilience to the different stages of a Crisis Management life cycle in the context of academic remote work during COVID-19.

5.1.1. Phase I: Pre-Crisis and Anticipation Stage

The pre-crisis stage consists of three sub-stages—signal detection, crisis prevention and crisis preparation. Pedersen et al. (2020) view the pre-crisis stage as three Ps, one that allows organizations to prevent (if possible), predict or prepare for a crisis. Depending on which sub-stage one prefers to adopt, Laugé et al. (2009) noted that while the signal detection sub-stage emphasizes warnings, information collection and analysis of the crisis, the prevention sub-stage works towards lessening the level of the risk, while preparedness points to having a Crisis Management plan, training, identifying vulnerabilities and effective communications (Laugé et al., 2009). Therefore, the main goal in the pre-crisis phase is to reduce any anticipated risks and be prepared strategically and tactically (Zamoum & Gorpe, 2018). In the COVID-19 setting, early detection in China allowed universities elsewhere in the world to apply threat detection strategies by assessing the environment

and the institution's present operating conditions. The institutions' CMPs at the pre-crisis stage provide the necessary resources for the continuation of operations of teaching and learning, research and other academic activities. The element of a resilience model at this stage focuses on observation and identification, which, according to [Ortiz-de-Mandojana and Bansal \(2016\)](#), allows institutions to recognize early signals of crisis and act quickly to avoid escalation. Important at this stage is training to help prepare and equip academics ([Dhawan, 2020](#)) and financial, logistics and health-related resources for addressing the anticipated remote work-related stressors ([Karlsson & Offord, 2023](#); [Sihag & Dhoopar, 2022](#); [Gurukkal, 2020](#)).

5.1.2. Phase II: Crisis Response and Coping Capabilities

The crisis response phase occurs when the crisis has hit the ground and is informed by two sub-stages—crisis recognition and crisis containment ([Zamoum & Gorpe, 2018](#)) or crisis acknowledgment and crisis response ([Laugé et al., 2009](#)). The corresponding resilience phase includes coping capabilities, which allow institutions to accept the crisis and develop and implement solutions. Thus, institutions acknowledge the crisis and respond by putting into action the CMP. The response and coping stages are tactical in nature, thus decision-making speed, action, behavior and communication (for both the internal and the external stakeholders or audiences) become vital elements in navigating the crisis. In the coronavirus pandemic and remote work setting, the stage seeks for management to recognize the pandemic and disseminate quick, accurate and consistent information to the stakeholders. The implementation of a CMP at this stage would be to lessen the immediate consequences and the associated side effects of the COVID-19 pandemic, e.g., resources to support academics working remotely, which may include working tools, ICT-based training, a workplace environment, productivity, health and work-life balance. Of importance is also the sound implementation of planned actions and continuous development of new policies and guidelines designed to assist academics working remotely ([Karlsson & Offord, 2023](#); [Sihag & Dhoopar, 2022](#); [Gurukkal, 2020](#)). Required by academics is the need to be flexible, digitally literate, organized, open-minded, creative thinkers and to possess the emotional capability to sail through the challenges imposed by remote working ([Dohaney et al., 2020](#)). In addition, [Ge et al. \(2022\)](#) pointed out the need to re-design work arrangements and conditions, workflow and training to suit remote work.

Many universities in South Africa, at the crisis response stage, provided consistent updates on information on their websites to keep abreast of COVID-19, sending weekly statements and detailing actions and procedures to follow to ensure continuity. Furthermore, [Bundy et al. \(2017\)](#) emphasize the importance of crisis leadership and stakeholders' perceptions and reactions to the crisis. In view of this, [Dohaney et al. \(2020\)](#) highlights leadership that provides incentives to encourage resilient initiatives, which in turn fosters the academic community's commitment towards establishing resilient systems. [Yücel \(2021\)](#) echoes the role of leaders in encouraging collaboration, promoting a sense of community and targeting the needs of the academic community to help reduce remote work anxiety.

5.1.3. Phase III: Post-Crisis and Adaptation

The focus at this stage is to assess the crisis recovery process, evaluate the Crisis Management strategy and better prepare for future crises. This stage allows institutions to evaluate the various actions taken in responding to the crisis. According to [Laugé et al. \(2009\)](#), the recovery process consists of corrective actions to solve the problems created by the crisis, while evaluation entails investigations into how and why the crisis occurred. This post-crisis stage fits well with the adaptation stage of resilience, which

entails the ability of institutions to adapt to critical situations, adjust following the crises and apply change for their own purposes towards advancement (Duchek, 2020; Limnios et al., 2014). In preparing for a future crisis, Pedersen et al. (2020) emphasized the need to measure the outcome of the crisis to ascertain how vulnerable, resilient or anti-fragile the system is after the crisis. The outcome after the crisis relates to how well-prepared the institution was in navigating the three phases of crisis (Pedersen & Ritter, 2020) and in providing opportunities for a learning experience (Bundy et al., 2017). Depending on the outcome, reputation repair and follow-up communication are still important at this stage, as institutions are required to provide updates on the recovery process and corrective actions. Institutions need to conduct an assessment of the aftermath impacts of the crisis and plan future development actions and strategies to mitigate future crises. Such actions would aim to assess the strengths and weaknesses of the alternative plans adopted during the crisis (Shaya et al., 2022), keeping the academic community engaged and enhancing its resilience (Sihag & Dhoopar, 2022). For example, the retention of the online learning experience can build academic resilience for future crises (Nandy et al., 2021; Karlsson & Offord, 2023). Financial, psychological and emotional support are also needed to ease the re-adaptation of academic activities (Bento et al., 2021; Sihag & Dhoopar, 2022; Shaya et al., 2022), and ongoing professional development, counseling and mentorship can facilitate academic staff recovery and strengthen their resilience.

Although the full impact of the COVID-19 remote work challenges for academics is yet to be completely understood, effective Crisis Management has become salient in the HEI environment. The post-crisis phase would therefore offer opportunities for social evaluations of academic staff perceptions of the effectiveness of the university's actions and procedures in managing the COVID-19 crisis. This is to ensure that possible changes are integrated to improve the existing institutional CMP to emerge stronger after the crisis and better prepared for future crises. The overall narrative review has shown resilience alignment across the Crisis Management framework emanating at individual and institutional levels applicable in the context of academic remote work. The authors hence propose an integrated framework of resilience in the Crisis Management cycle in the context of COVID-19 remote work, as shown in Figure 3.

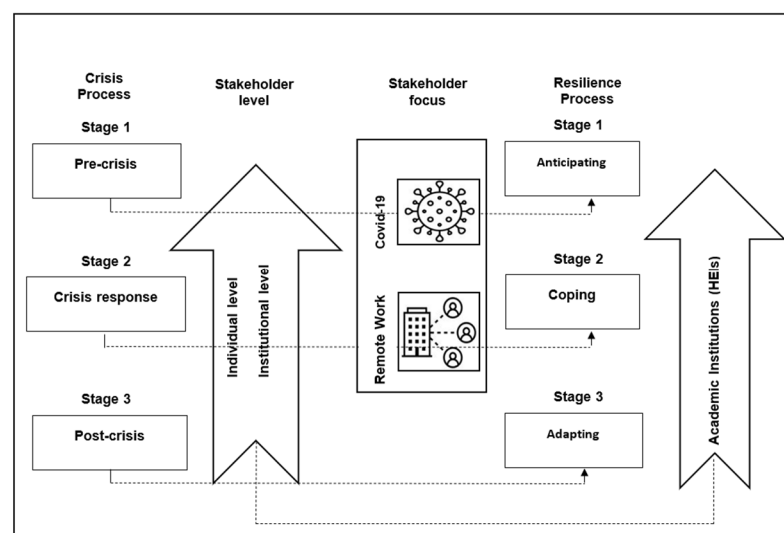


Figure 3. Conceptual framework: COVID-19 remote work context of resilience and Crisis Management. Source: Authors' concept.

The resilience theory argues that the most important thing in a crisis is not the crisis itself but how to deal with it. de Oliveira and Werther (2013) added that the ability to

detect critical developments both internally and externally to ensure proactive and adaptive processes becomes a key element for institutions. A resilient system should therefore have sufficient adaptive capacity to sustain the crisis; hence, the proposed framework in Figure 3 illustrates this. Overall, resilience can be developed across the stages of Crisis Management by establishing policies and procedures and continuity plans to respond to crises, developing strategies to manage the challenges associated with remote work, prioritizing the well-being of the academic community and acquiring technology to maintain business continuity.

5.2. Quality Assessment

Evaluating the validity of included studies is an integral component of a systematic literature review, and its findings depend on the methodological quality of those respective articles (Negarande & Beykmirza, 2020; Whiting et al., 2017). The researchers focused on reducing the levels of bias in the study by adopting a framework and following a protocol. The key content of the protocol followed includes setting the objectives, screening and search strategies, determining sources of data and eligibility criteria and data extraction and analysis. The researchers also used reputable databases, independently extracted, assessed all the articles, discussed any elements of ambiguity, set out inclusion and exclusion criteria, agreed on studies relevant in addressing the research objectives and reviewed the full-text articles of those studies. It is therefore believed that this procedure is reasonable and defensible and strengthens the quality of the study.

6. Conclusions, Limitations and Future Direction

The COVID-19 pandemic served as a phenomenal change event for HEIs by forcing institutions to re-design and implement flexible solutions to adapt to the new reality of remote work, which had hardly applied to academics before the pandemic. The transition to remote work witnessed changes to the culture, design and structure of HEIs, requiring management to make critical decisions to shape the future of the institutions. The ability to respond to new challenges and withstand and recover from such an unpredictable disruption is of utmost importance. In such a volatile environment, resilience becomes a critical skill and a core competence needed to navigate every step in remote work challenges. Through a systematic literature review and discussion of relevant literature, the objectives of the study were tested.

The first objective set out for this study was to understand the resilience of academics in remote working arrangements during the COVID-19 pandemic. The finding shows that academics' resilience for remote work during the COVID-19 pandemic emerged at both individual and institutional levels. At individual levels, academics applied various coping strategies, which entailed maintaining levels of mental flexibility and emotional regulation, among others. A major source of these coping strategies, as suggested in literature, stems from an individual's sense of coherence (SOC), which consists of a sense of meaningfulness, comprehensibility and manageability. The ability to apply these components of SOC strengthens an individual's resiliency. At institutional levels, resiliency is strengthened through the process, strategy, outcome and behavior that define the organization. These are reflected in the institution's living values, goals and culture. Hence, a combination of individual and institutional coping strategies helped to explain the academics' resiliency with remote work during COVID-19 pandemic era.

The second objective of the study explored the application of resilience across the stages of the Crisis Management framework in addressing the challenges of remote working arrangements. The findings indicated that the resilience framework could be applied across a Crisis Management framework, thus leading to the development of Figure 3. The

framework shows a comprehensive understanding of how elements of resilience can be integrated into a Crisis Management cycle.

This research, therefore, makes theoretical contributions to the literature on crisis and resilience in the context of academic remote work in higher education. It is important to note that this study is not without limitations. Recalling that the COVID-19 pandemic caused a major shift in the norms and culture of academic work, at the time of conducting this study, a paucity of literature existed in the research area. Hence, the analysis is of only 11 academic peer-reviewed papers. However, the researchers attempted to strengthen the line of argument by citing studies within the concept but outside of academia, for example, [Danioni et al. \(2021\)](#). Although the study population was not indicated, it is believed that the Italian adult population includes academics, and the study was conducted by researchers working in a university environment. Furthermore, due to the scarcity of studies, the authors recommend that more research be conducted in the areas of resilience and Crisis Management given the unpreparedness of HEIs to cope during the outbreak of COVID-19 pandemic, after which many are still struggling with the ripple effect. Future studies are needed to test the developed framework for Crisis Management.

Author Contributions: Conceptualization, O.E.O.-U.; methodology, O.E.O.-U.; software, O.E.O.-U.; validation, O.E.O.-U. and E.P.N.H.; formal analysis, O.E.O.-U.; investigation, O.E.O.-U. and E.P.N.H.; resources, O.E.O.-U.; data curation, O.E.O.-U. and E.P.N.H.; writing—original draft preparation, O.E.O.-U. and E.P.N.H.; writing—review and editing, O.E.O.-U. and E.P.N.H.; visualization, O.E.O.-U.; supervision, O.E.O.-U.; project administration, O.E.O.-U.; funding acquisition, O.E.O.-U. and E.P.N.H. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Data are contained within the article.

Conflicts of Interest: The authors declare no conflicts of interest.

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