



South African Higher Education Institutions at the Beginning of the Covid-19 Pandemic: Sense-Making and Lessons Learnt

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After the unprecedented changes experienced in higher education due to the Covid-19 pandemic, there is a need to integrate initial thoughts and reflective experience to decide on the way forward. This study aimed to reflect on, and make sense of the events related to South African higher education institutions HEIs at the onset of the COVID-19 pandemic by using the Cynefin framework. Data from a rapid review of online media at the onset of the Covid-19 pandemic and a collaborative autoethnography session 1 year since lockdowns were implemented are used to present perspectives for the sense-making process. This offers insights to both ends of the spectrum as it highlights the evolution of processes taking place at multiple levels from government policies to institutional practices, as well as how this impacted on both staff and students. The Cynefin framework demonstrated sense-making efforts in the disordered, to the chaotic, to the complex, then to the complicated and eventually to the simple domain. Each domain ushered in its peculiarities and highlighted the issues ranging from vulnerabilities experienced in the higher education sector, to trying to reconfigure the academic year, to dealing with wicked problems, to eventually relying on expert assistance to navigate the virtual university space. Trying to establish causality in the simple domain proved challenging as the information available during the time was sparse. Despite these challenges, the lessons learnt include the importance of the sense-making process among all academic staff, the significance of collaboration and team efforts and the need to adapt leadership and self-leadership approaches to the changed ways of working in higher education institutions.

Keywords: sense-making, cynefin, COVID-19, higher education, South Africa, collaborative autoethnography, rapid review

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INTRODUCTION

Higher education institutions (HEIs) worldwide are affected by the COVID-19 pandemic with resultant campus closures to enforce social distancing measures (Toquero, 2020). Whilst the disruption was one of public health, the impact on Higher Education Institutions (HEIs) was momentous (Krishnamurthy, 2020). Many institutions were compelled to identify and implement various strategies that contributed to sustaining the academic project and these included but were not

limited to engaging in emergency remote learning and teaching, working from home arrangements for staff, finding alternative ways to support students and reallocation of budgets to address the emerging needs. The COVID-19 pandemic changed the lives of students in multiple ways, including displacement from their homes and campuses, financial struggles, loss of internships and the need to learn new technologies in addition to the content of their subjects (Govindarajan and Srivastava, 2020).

From an operational perspective, most South African HEIs have business continuity plans in place as a result of learning from the #feesmustfall movement in 2015/2016, which sparked heated debates and militant student protests on the fee increases in South African universities (Pillay, 2016). The operational result of these protests included implementing business continuity plans where all academic activities had to be conducted online or off campus due to the volatility of the protest action by students. While these plans may be useful, it is unclear whether these plans were, and are, effective for the preparedness of HEIs to deal with unprecedented threats such as the COVID-19 pandemic (Dikid et al., 2020) to the academic project. Toquero (2020) reports that numerous higher education institutions in the Philippines were completely unprepared for such an event. Rashid and Yadav (2020) point out that during the COVID-19 pandemic there are no best practices for HEIs to mimic and no known models to follow. Similarly, Bryce et al. (2020) acknowledge that established crisis management responses can be ineffective and business continuity can be severely disrupted during a pandemic.

According to Wangenge and Kupe (2020):1, “the unfolding of the COVID-19 pandemic in South Africa is interwoven into an existing socioeconomic context ridden with poverty and deep, unsustainable inequalities”. Aligned with this, HEIs in South Africa faced an uncertain future as dwindling funds in the sector was a challenge. This meant that HEIs had to consider various aspects when they made decisions on how to manage the pandemic, but also on how to plan for sustainability. More than 1 year after the announcement of the COVID-19 pandemic, this article attempts to make sense of what happened in order to extract lessons for the way forward. The first quarter of the COVID-19 pandemic (April - June 2021) referred to as the “hard lockdown” period, or Levels 5 and 4 of the COVID-19 pandemic lockdown levels, was characterized by uncertainty and isolation for people living, studying and working in South Africa. Many individuals relied on news from online and social media for information and sense-making. Naturally, what was reported in the media may not have provided the full picture of what was happening behind the scenes to keep HEIs operational and to save the academic year (www.cdc.gov/coronavirus/2019-ncov/community/colleges-universities/considerations.html, accessed on June 10, 2021). Therefore, the need to incorporate different sources of information, including the experiences of those who were employed in the HEI sector, is paramount for effective sense-making.

This study aimed to reflect on, and make sense of the events related to South African HEIs at the beginning of the COVID-19 pandemic. Sense-making aims to create a holistic picture of an event that cannot be understood clearly (Ganon-Shilon and

Schlechter, 2017). For this purpose and in the context of higher education and the COVID-19 pandemic, messages conveyed through different online media sources were reviewed together with the reflections of academics’ lived experiences of such an ambiguous event. Initial thought processes and experiences were plotted on the Cynefin framework (Snowden, 1999) to assist with translating new knowledge into learning and suggested actions.

MATERIALS AND METHODS

Research Design Overview

This study focuses on the HEIs initial responses to the COVID-19 pandemic. The data was collected in two phases. First, a rapid review of online news media was conducted to determine the preparedness and crisis responsiveness of institutions of higher education at the onset of the COVID-19 pandemic. The reason for the rapid review is that news report online media was ahead in providing information regarding the pandemic, monitoring disease management and behavior of people (Sahni and Sharma, 2020). Whilst news media was responsive in communication, universities extended recess periods and took time to prepare their response. Therefore, in the absence of clear direction communicated by the university, many academics at the research university had only news reports to use for sense-making. This review formed part of a larger project, known as the #Openupyourthinking SADC researchers’ challenge hosted by JET and UNESCO (<https://www.jet.org.za/covid-19-research-response/sadc-research-challenge>). The main purpose of this challenge was to contribute to evidence on how education and training systems in the SADC regions are affected by, and respond to the COVID-19 pandemic. The #openupyourthinking ‘bootcamp’ challenged researchers’ to conduct and present their research findings within 6-weeks, between April and May 2020. Using the rapid review design allowed us to meet the deadline. Rapid reviews are useful when there is an urgent need for synthesizing information in order to provide guidance to the public or a specific stakeholder (Tricco et al., 2017). The guiding principles for how this method was used were: the amount of time in which one has to conduct a rapid review significantly impact on the extent to which a comprehensive search for all available evidence is conducted, and therefore, a process for identifying evidence is needed to ensure the search is effective and efficient to produce relevant results in a timely manner. The actual review was initiated in May 2020, and completed in July 2020. The content review took place between April 2021 to June 2021.

Phase 2 utilized a collaborative autoethnography approach to capture the reflections and experiences of a team of researchers. Eleven researchers participated in a collective sense-making session, aimed at capturing the narratives, experiences and reflections of researchers through collaborative ethnography. Collaborative Autoethnography (CAE) is useful as it sidesteps issues of voice appropriation, given that all collaborators are acknowledged as co-owners and co-authors in this study. This method was chosen specifically because: 1. it has the potential to

lessen power dynamics as all co-researchers are rendered vulnerable in sharing their stories; 2. it provides a multi-disciplinary lens to the inquiry, resulting in addressing issues of rigor, narcissism, or self-indulgence (Chang, 2013). The philosophical underpinnings of a qualitative descriptive approach, as adapted from Bradshaw et al. (2017) has been adopted here and is represented by an emic perspective, or an insider view. The group session was held in April 2021. Thereafter, captured reflections were circulated in writing to the team of researchers, and further interactions of reflections were captured. For the data analysis, the explanation of the findings was guided by the Cynefin framework.

The Cynefin Framework as Interpretation Frame

Snowden (1999) conceptualized the Cynefin framework, drawing on, amongst others, systems, complexity, network and learning theories. The Welsh word ‘cynefin’ refers to ‘habitat’, indicating a myriad of relationships such as those of kinship, culture and location (Van Beurden et al., 2013). The theory is built on the premise that one is never fully aware of all the relationships in the habitat, however, the patterns of multiple experiences that emerge from them influence all interactions (Kurtz and Snowden, 2003). The Cynefin framework therefore helps individuals and groups to make sense of this complex process and to act appropriately.

Utilizing a constraint-based definition, the framework categorizes the “places of multiple belongings” - situations - into five exclusive domains namely the disorderly, chaotic, complex, complicated and simple, each with its own principal differences, and warranting different ways of responding and management (Lambe, 2007). The domains are predicted on the construct of order (Snowden, 2010). The ordered domains are labeled *simple* and *complicated*, whilst the un-ordered domains are *complex* and *chaos*. It is worthwhile to note that un-ordered domains do not refer to a lack of order, but rather a “different” type of order, i.e. order that is not directed or designed, but “emergent” (Kurtz and Snowden, 2003). A fifth domain exists, namely *disorder*. The section below describes unpacks each of the five categories.

Simple Domain

In this domain, linear causality and patterns of causality are known and well established. The domain is characterized by clear cause and effect, and is in the realm of the “known knowns” (Kurtz and Snowden, 2003; Snowden and Boone, 2007). As such, decision-making is highly predictable and anticipated, as one can sense the situation, categorize it and respond, based on best practice (Kurtz and Snowden, 2003; Snowden, 1999; Snowden, 2000; Snowden and Boone, 2007). An appropriate management model for the simple domain would be top-down control, coordinated by a central manager (Van Beurden et al., 2013).

Complicated Domain

The complicated domain is an ordered domain, characterized by cause and effect. However, in this domain, there may be multiple correct answers. The decision model is therefore to sense, analyze, and respond. This requires expertise to choose the appropriate

answer (i.e., good, rather than best, practice). Experts are utilized to (generate and) analyze data in a manner that allows less obvious relationships to be made clear and thus follow good practices to address the situations (Kurtz and Snowden, 2003; Snowden and Boone, 2007). Possible practices are systems thinking and scenario planning. An appropriate group function is co-operation (Van Beurden et al., 2013).

Complex Domain

The complex domain is characterized by unpredictability and change. Cause and effect are only understood in hindsight, and experimentation is required to find answers for the situation (Van Beurden et al., 2013). The approach in this domain is to map the present, explore what can and where things can be changed, monitor closely, reinforce/improve things that are working and disrupt those that are not working—a typical “probe-sense-respond” (Kurtz and Snowden, 2003; Snowden and Boone, 2007). While in this situation, it is important to ensure that one does not fall into the traditional command-and-control management style. Learning is a critical tenet, coupled with patience. Imposing order could be fatal, whilst encouraging distributed leadership among diverse and strongly linked partners is also considered advantageous. A highly collaborative approach to group function is desirable, and the more diverse the partners, the better a system can be understood and appropriate probes be developed (Van Beurden et al., 2013).

Chaotic Domain

Turbulence and the absence of any link between cause and effect characterize the domain of chaos. There is no semblance of order under this situation. Hence, it is impossible to anticipate any patterns of cause and effect (Kurtz and Snowden, 2003; Snowden and Boone, 2007). Swift action, at times with very minimal consultation, is required lest the situation deteriorates even further. Hence, emergency measures (act) are enforced, and as the situation stabilizes, there is an opportunity to describe what is happening (sense) and respond as informed by emerging reality (Kurtz and Snowden, 2003; Snowden and Boone, 2007). There are no constraints under the chaotic domain, thus it creates opportunities for creativity and innovation with novel choices. From a leadership perspective, directive interventions are needed to manage the crisis in an attempt to move to a different domain (Van Beurden et al., 2013).

Disordered Domain

The fifth domain, namely disorder, is where people are unable to decide which of the other domains represent the situation. When in this state, it is important to constantly appreciate the realities of the day and avoid seeing all apparent problems in the light of previously successful solutions or making decisions based on personal preferences (Kurtz and Snowden, 2003; Snowden and Boone, 2007). Pausing and reflecting are critical tenets when one is unsure. This domain can be reduced in size through discussion and sense-making of the situation to reach consensus and to choose the appropriate type of response (Van Beurden et al., 2013).

It is important to note that no domain is more desirable than another. The domains are merely used to describe the situation facing the organization to assist with creating meaning and deciding on appropriate action. The underlying tenet of this sense-making framework is the recognition that situational awareness is critical to provide structured and conscious insights that help shape and frame informed decisions by leaders (Snowden, 1999; Snowden, 2000).

Epistemological Positioning as Participant-Researchers

Central to collaborative autoethnography is the duty of all participant-researchers to reflect on their subjectivities as stakeholders who take ownership of their culturally-informed biases, assumptions and beliefs as well as how these have facilitated their experiences and moderated their storytelling about the project in question.

The discussions about the project were undeniably shaped by their homogeneity as academics and researchers from a historically disadvantaged institution (HDI). While the common denominator is their membership of a HDI, they are employed in diverse positions ranging from a Deputy Vice Chancellor position, to Deputy Deans, Associate Professors, Directors, Researchers and Research Assistants. This multiplicity of positions thus influenced the issues that were highlighted and those that may have been omitted. Additionally, their reflections were influenced by their direct experiences of the COVID-19 pandemic while being situated in a position of historical disadvantage, particularly where resources are concerned.

Data Collection

Phase 1: Rapid Review of Online Media

Search Strategy for the Rapid Review

Searches were limited to websites from the *DispatchLive*, *eNCA*, *Daily Maverick*, *Inside Education*, *News24*, *Mail & Guardian*, *Times Higher Education*, *the Sunday Times Live*, *Bhekisisa*, *ADEA*, *University World News Global*, *The Conversation* and *Google News*. The time period was April to June 2020. Forty search terms were used related to higher education institutions, universities, COVID-19, impact and stakeholders (staff, students, academics). The search focused on universities in the SADC region. It is noted that most sources referred specifically to HEIs in South Africa and the South African government. The eligible online news articles uniform resource locator (URL) site was captured on an excel spreadsheet and duplicates were removed.

Inclusion and Exclusion Criteria

The online news URL website was recorded if they reported on the preparedness and responsiveness of HEI's during the COVID-19 pandemic.

Screening and Eligibility

Three teams of two to three researchers conducted the searches. The teams included a lead researcher and one or two researchers

from two African universities. The selection of online news sources was guided by the research objective: What is online media focusing on to describe the impact of COVID-19 on stakeholders in higher education? The news sources specifically focused on the impact of COVID-19 on higher education and included a variety of media types including interviews, reports, opinions, essays, etc. To enhance reliability, the research team differentiated fake from real news by applying the following evaluation criteria: consider the source (click away from the story to investigate the site, its mission and its contact information), check the author (are they credible and real?), check the date (to ensure current events), check your biases (consider how own beliefs could affect one's judgement), read beyond (check exaggeration and the whole story), assess supporting sources (does supporting links corroborate the facts), is it a joke (research the author and site to validate), and ask the experts (ask a librarian or consult a fact-checking site). The purpose of evaluating online media was to describe the impact of COVID-19 on stakeholders in HE. Each team was allocated four to five online news media platforms. The researchers on each team worked independently to search for the eligible news articles. This was then assessed by the other researchers on the team. Disagreements were resolved via discussions through online meetings to reach consensus. If consensus could not be reached, the lead researcher was consulted.

Quality Assessment and Data Extraction

Data were independently extracted using a self-constructed data extraction form to include the media platform, link, date extracted, reference, title, preparedness and responsiveness. The data extraction framework was adapted from Roman and Frantz (2013) according to the aims and objectives of the study. The findings from all the news media platforms were collated into one excel spreadsheet, analyzed for common themes and reported via a narrative summary.

Phase 2: Collaborative autoethnography

Research Setting and Data Collection

Eleven researchers, affiliated to one public university in South Africa, were conveniently sampled and met in a group setting with the distinct purpose of sharing personal narratives and experiences of a specific social phenomenon. The session was facilitated by the first author, who posed the following question to the group: "It is the period of April to June 2020, think of the preparedness and responsiveness of HEI's at the beginning of the Covid-19 pandemic." Participants could then volunteer their experiences and indicate which quadrant of the Cynefin framework best characterizes the experience. The facilitator asked questions such as: "In which quadrant do you think that experience fits?"; "Am I correctly naming the experience?". The facilitator captured the experiences and bullet point notes to explain the experience on a flip chart, organized by the quadrants of the Cynefin framework, whilst another author captured underlying themes that emerged during the discussion. The facilitator used the skills of paraphrasing and empathic responses to deepen the sharing of experiences. These

TABLE 1 | Collaborative autoethnography research participants' demographics ($n = 11$).

Demographic characteristic	Number of participants
Gender	
Female	8
Male	3
Age	
20–30 years old	3
31–40 years old	1
41–50 years old	2
51–60 years old	5
Tenure at the institution	
0–5 years	4
6–10 years	1
11–20 years	3
21–30 years	2
31+ years	1
Faculty	
Community and Health Sciences	7
Economic and Management Sciences	2
Division for Research and Innovation	2

experiences were then deepened by reflections from other researchers. Facilitative questions such as: “Is there anyone else who had a similar experience?”; “What sense did you make from the experience?” were used. The session lasted for 60 min. **Table 1** displays the demographics of the researchers.

The iterative process of reflection was continued through circulating the captured reflections with the group of researchers via a shared Google document. Further reflections and sense-making was captured and incorporated, as relevant.

Ethical Considerations

The researchers received ethical clearance from the respective university to which they are affiliated. All online media sources utilized in phase 1 are available in the public domain. In phase 2 we considered that for collaborative autoethnography to be effective and ethical, all participation was completely voluntary, the sharing space was not hierarchical nor coercive and there was consensus on the focus of the project. In this study, all co-researchers were consulted and written informed consent was obtained. The discussion was facilitated by the first author, a trained psychologist, who was attuned to the needs of the group. Due to the sensitive nature of the discussion, the facilitator allowed all participants to debrief as well. Participants' responses were not identified by name, thereby limiting confidentiality concerns.

Data Analysis

As mentioned, the Cynefin framework was used as a lens to understand the phenomenon being studied. The data set consisted of two elements which are discussed in the subsections.

Media Findings

Two researchers (CJ and AS) worked together throughout the analysis process which was an iterative one. They read through all the media extracts and allocated them to the five domains. A

narrative was developed to describe the themes under each domain.

Collaborative Autoethnography Findings

A process of interactive qualitative analysis (IQA) was followed for the analysis of the collaborative autoethnographic data. IQA provides a systemic, rigorous and accountable framework for qualitative inquiry (Northcutt and McCoy, 2004), especially when researchers wish to examine how phenomena are socially constructed. During the collaborative autoethnographic process, participants were asked to share their organized thoughts and experiences. The words representing codes were socially constructed through in-depth discussion, reasoning, and expressing individual thoughts and experiences on a flipchart for all to see and agree on. After participants were satisfied with the names and the categorization within the Cynefin framework, the comprehensive description was captured by two authors (MdP and MA). The description was subsequently circulated to all the participants for further clarification, finalization and additions. This research method directly challenges the idea that the researcher is the expert who must “interpret” the participants' data. Thus, what sets IQA apart from other forms of qualitative inquiry, is that participants are entrusted with the theoretical analysis and interpretation of their data. The Cynefin framework was used to interpret the data.

RESULTS

The integrated themes from the rapid review and CAE process were plotted on the Cynefin framework. Themes were kept within the domain in which it was identified. Furthermore, the themes based on the strategies contained within the domain were assessed. In this regard, *sense* is explained as assessing the facts of the situation, *categorize* is to organize the facts, *respond* indicates formulating a response based on established practices, *analyze* reflects investigating options available, *probe* means to explore options, and *act* reflects taking action.

Disordered Domain

The disordered domain represents the inability to decide which of the other domains represent the situation. In the initial phase of the COVID-19 pandemic in South Africa, the online media and the CAE findings revealed that the higher education sector was in disarray. This is representative of the major uncertainties experienced and the vulnerabilities exposed through the inequalities and inequities experienced by both students and staff. This is discussed further below.

Ambiguity and Uncertainty

In response to the COVID-19 pandemic, South Africa entered into a 21-days lockdown on Thursday, 26 March, and due to infection rates rising, the lockdown was extended to the end of April 2020. At this time, higher education institutions, together with the Department of Higher Education and Training, were faced with tough decisions concerning the academic year,

resulting in disorder. With all institutions closed, questions were raised about salvaging the academic year.

Do we take a risk and reopen schools, colleges and universities for the sake of salvaging the academic year? Is it a risk worth taking, given the possibility of mass infections in those spaces? City Press, 16 april 2020, Mabhele Dyasi¹

This uncertainty was mirrored by the experiences of participants in the CAE. Having been at the forefront of higher education changes as the COVID-19 pandemic lockdown was announced, participants agreed that major uncertainty was experienced. No one knew the extent of the COVID-19 pandemic, nor the measures that needed to be taken. Ambiguity was evident as participants initially prepared for a 3-week lockdown followed by a return to campus, but it soon became clear that this would not happen. A dire need for clarity and direction were needed as participants struggled to make sense of the situation.

Higher Education Sector Is Vulnerable

The higher education sector was at its most vulnerable and disordered at the start of the COVID-19 pandemic. Vulnerability was identified within the institution as well as amongst key stakeholders like students and staff. This was depicted in the *Daily Maverick*.

“while it is true that our institutions do have a greater or lesser proportion of vulnerabilities, the reality is that our entire sector is vulnerable.”²

Furthermore, the COVID-19 pandemic exposed the inequalities within and between universities as some institutions were ready to move to teaching online and continue with the academic term, whereas others faced severe constraints related to students’ poor access to technology and poor socio-economic circumstances.

“it would have us believe that our sector is divided between universities that are largely “good to go” and universities that are unable to proceed due to severe constraints of their students, including poor access to technology, and poor socio-economic circumstances particularly at this time of an economic downturn. . . The bigger reality is that we have been leaving students behind for decades.”

Daily Maverick. 3 May 2020. Suellen Shay³

While universities made strides towards preparing to go online, the online media depicted that the COVID-19 pandemic exposed the gaps and vulnerabilities of universities and that “*we have been leaving students behind for decades.*”

Lack of Technology Devices

The challenges surrounding online learning highlighted the inequalities at higher education institutions and demonstrated that South Africa may not be prepared for the 4th industrial revolution. *The South African* stated:

“This pandemic is proving that South Africa is not ready for the Fourth Industrial Revolution (4IR) if its implementation calls for some people to be left behind. It also highlights the gap that exists between the rich and the poor, and that the marginalised and disenfranchised are always left behind.”

The South African, 10 June 2020, Nokwanda Ncwane⁴

The lack of technology devices highlights systemic inequities among HEI’s in South Africa, with political parties calling upon the Department of Higher Education and Training to provide digital learning devices, such as laptops, and furthermore, universities appealing to the public and business sector to assist by funding laptops and data for students who were unable to engage in remote learning. One political party stated:

. . . it is the duty of a responsible government to look out for the poor and historically disadvantaged. . . the State should not hesitate to purchase laptops and data for all students in historically black universities so that their learning can continue virtually.

The South African, 12 May 2020, Andrea Chothia⁵

In addition, CAE participants recalled that staff members *lacked technology* resources, and were urgently issued with laptops, or permission was given to take desktop computers home.

Not only did online learning usher in its own challenges, but so did online teaching with one of them being the implementation of and quality assurance of remote teaching. In addition to the above-mentioned challenges, it was recognized that programs such as lab-based research and experiential and clinical training could not automatically be transported to the online space. This compelled stakeholders to seek solutions for flexible learning pathways jointly. This is depicted by the *World Education Blog* below:

There should be a coordinated approach between governments, quality assurance agencies and higher education institutions that addresses not only available resources but also a broader vision of what

¹<https://www.news24.com/citypress/voices/will-the-2020-academic-year-be-salvaged-20200416-2>

²<https://www.dailymaverick.co.za/article/2020-05-03-online-remote-teaching-in-higher-education-is-not-the-problem/>

³<https://www.dailymaverick.co.za/article/2020-05-03-online-remote-teaching-in-higher-education-is-not-the-problem/>

⁴<https://www.thesouthafrican.com/opinion/remote-learning-lockdown-challenges-south-africa/>

⁵<https://www.thesouthafrican.com/news/laptops-data-for-pupils-students-during-lockdown-eff/>

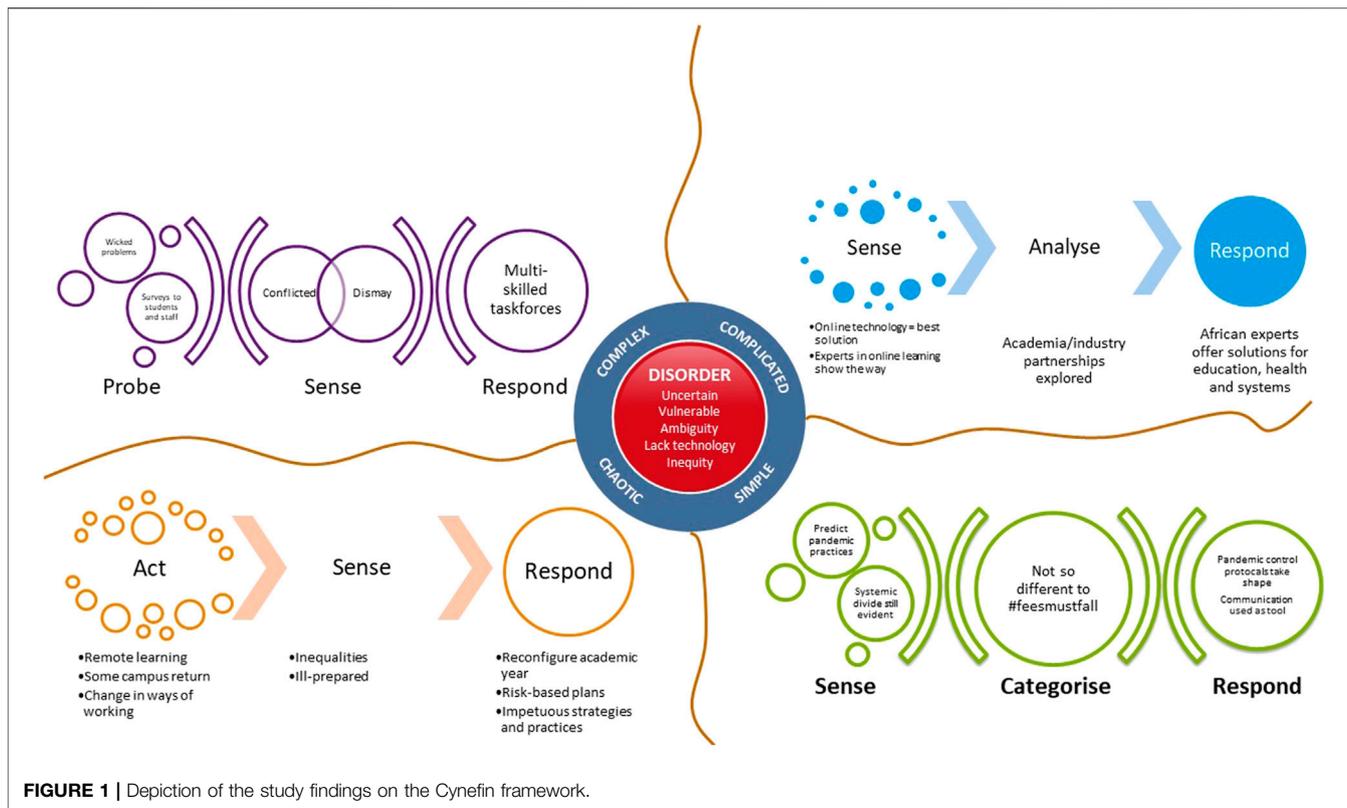


FIGURE 1 | Depiction of the study findings on the Cynefin framework.

flexibility of learning can provide. Offering more flexible higher education in terms of delivery and pacing will be unavoidable if the Covid-19 crisis is going to be around for a while, and defining flexible quality standards for it will be indispensable as well.

World Education Blog, 7 May 2020, GEM Report⁶

Chaotic Domain

The chaotic domain, being characterized by turbulence and a lack of order, includes a number of experiences that reflect the need to *change the established ways of working*. Swift action, at times with minimal consultation, is required lest the situation deteriorated even further. Hence, emergency measures (*act*) are enforced, and as the situation stabilizes, there is an opportunity to describe what is happening (*sense*) and *respond* as informed by emerging reality (Kurtz and Snowden, 2003; Snowden and Boone, 2007). **Figure 1** provides a visual representation of the different domain's themes and sub-themes identified.

Act

Moving Online

As universities prepared to switch to remote online learning and teaching, the *Daily Maverick* listed four critical issues that needed to be considered by universities to make online learning a success.

“The lockdown has several implications for universities in South Africa. Universities have sent their students home and they have been informed that the second term will be completed online . . . There are four critical issues that universities have to consider to make their online venture a success: affordability, connectivity, assessment and student support. The most important of these four issues are affordability and connectivity.”

Daily Maverick, 9 april 2020, Jacob Cloete⁷

In contrast to the media’s online requirements specified above, one aspect that was not taken into consideration was how moving online affected academic staff. When participants from the CAE were asked to think back to the onset of COVID-19, participants reflected on the sudden move from face-to-face to online learning and teaching, and more so, online meetings. The CAE findings revealed that at the beginning of this process, no one knew how online meetings and teaching worked, what the protocols were, or the length and volume of the meetings. A further observation was made that online meeting behavior was different to face-to-face social norms. A participant expressed it as “Some people become ‘brave’ in what they say”, referring to meeting participants who will say things they would not usually say in a face-to-face meeting, whilst others receded into the backline and hid

⁶<https://gemreportunesco.wordpress.com/2020/05/07/flexible-learning-during-covid-19-how-to-ensure-quality-higher-education-at-a-distance/>

⁷<https://www.dailymaverick.co.za/opinionista/2020-04-09-sa-universities-are-failing-to-meet-the-challenges-of-teaching-during-the-covid-19-lockdown/>

(physically by switching off the camera, remaining silent, or hiding behind the excuse of a bad connection).

Furthermore, participants reflected that the online environment changed the nature of relationships. Some found it more difficult to manage conflict in this environment. For others, the virtual format of the meeting provided a buffer: “I was glad I was online, because I would have smacked some people.” Additionally, new staff members found the online environment very challenging as they lacked the opportunity to meet and interact with their colleagues face-to-face. One participant expressed: “I didn’t know this guy. I didn’t know what I could and couldn’t say to him.”

Change in Ways of Working

The research participants reflected on the many issues experienced with regard to human resource (HR) practices in the changed way of working, a matter which was not reflected in the media. One of the issues experienced was related to no-work-no-pay. For some staff members, whose work became obsolete as a result of the work-from-home approach, it was difficult to have these conversations with HR. Some of these discussions took place irrespective of understanding the personal circumstances of employees. Mostly, rather than retrenching employees, an effort was made towards reskilling. However, this was not an easy task as resistance was experienced from individuals who needed to be reskilled as they felt it was not their fault that their work became obsolete. Leaders therefore had to use creative thinking to determine the area of reskilling, and then deal with the challenges associated with doing this in an online format. Similarly, for employees working from home, it was difficult to implement standardized management approaches as employees’ circumstances were so different.

From an occupational health perspective, participants experienced that there was minimal understanding about COVID-19 infection needs and long-term consequences that employees may suffer. There was also no clear policy or implementation of sick leave needed for quarantine, COVID-19 infection with a medical certificate as proof, and assumed COVID-19 infection without a medical certificate of proof. The general uncertainty of how to deal with these matters from an HR perspective led to the use of unstandardized approaches.

Furthermore, participants mentioned that well-being initiatives driven by the HR department received a lot of attention, but were still questioned. The perception emerged that the type of support provided was general and umbrella-like. Whilst mental health was foregrounded by the institution, many employees experienced uncertainty of how to cope.

Phased Return to Campuses

The media reported that in June 2020, universities such as the University of Cape Town, prepared for a phased return of students and staff onto campuses. Despite the return of students and staff, online teaching continued and no contact teaching resumed.

“Under national Alert Level 3, depending on a tertiary institution’s capacity, no more than a maximum of 33%

of students will be allowed to return to campus and residences.”

“The plan for a gradual and phased return of students, as health and safety conditions allow, does not at this point in any way mean that the current emergency remote teaching programme will stop. UCT will continue with remote teaching until the end of Term 3. The phased return to campus of some staff and students does not mean the resumption of contact teaching.”

The South African, 29 May 2020⁸

Some authentic experiences of academic staff indicated a strong sense that return-to-work strategies were not adequately thought through. An example was mentioned of an employee who had passed away, and the individual’s space was occupied by others. The awareness was raised that staff members may have grieved the loss of a colleague through virtual ceremonies and discussions, but the role of space and place will only be faced when staff return to campus. A critical question to be considered is how colleagues will adapt and deal with multiple losses and changes that took place in the year that they were not on campus.

Sense

Inequalities

Similarly, to the change in ways of working, especially the change in interpersonal relationships discussed above, participants experienced the polarized performance and effectiveness of some administrators. One participant phrased it as “Some administrators went AWOL [absent without leave].” Others reflected on the role that power and rank played in whether administrators would answer/help you. Unfortunately, the higher the employee’s ranking, the better the response, which meant that students possibly suffered the most. Apart from receiving responses from administrators, the process of administration was found to be challenging. Participants expressed that it was difficult to accomplish and finish off tasks as new protocols were required (for instance, signing off invoices in an electronic manner).

Ill-Prepared

Another similarity with HR practices discussed above: participants expressed that staff did not always feel that managers were supportive. It was difficult to say when you were struggling to manage the physical, emotional and cognitive demands of the work. At the same time, managers were perceived to be ill-prepared to provide support (emotional and operational) in the work-from-home environment. The concept of flexible work was new to managers as employees had to manage children and other home demands with their work. This finding was not reflected in online media.

⁸<https://www.thesouthafrican.com/news/university-of-cape-town-uct-level-3-lockdown/>

Respond

Reconfigure Academic Year

When President Cyril Ramaphosa declared a state of national disaster, the media reported that universities were compelled to shut their doors and postpone classes and graduation, however, some universities advocated for “*business as usual*.” and for the academic year not be affected.

“All classes, tests, laboratory sessions, practical and experiential learning activities will continue as normal. As the week of 16 March is the start of our second term, students are encouraged to make a special effort to attend all academic activities.”

News24, 16 March 2020, Azarrah Karrim and Alex Mitchley⁹

Petitions to close universities, resulting in the postponement of face-to-face classes in higher education, raised many concerns with regard to the 2020 academic year. In response to the chaos and uncertainties, especially among the public, a COVID-19 departmental task team was established by the Minister of Higher Education and Training which consisted of vice-chancellors and the SA Union of Students. Discussions on a possible reconfiguration of the academic year were held, with solutions such as online teaching being at the top of the list.

“A common reopening date, online learning and reconfiguring the academic calendar to align it with that of the northern hemisphere — these are all possible scenarios for SA tertiary institutions dealing with the fallout from the Covid-19 pandemic.”

Sunday Times, 6 april 2020, Sisanda Aluta Mbolekwa¹⁰

“Universities around South Africa are getting ready to resume the academic year next week. Only this time, students won’t be flooding back to campuses after a lengthy vacation. Instead, online teaching and learning has been touted as the top solution to save the academic year in the midst of the Covid-19 pandemic and the extended lockdown period.”

Daily Maverick, 17 april 2020, Sandisiwe Shoba¹¹

Risk-Based Plans

News24 reported that a “risk-based plan” was presented to all members in Parliament, which detailed the department’s plans to save the academic year. As South Africa anticipated the shift in lockdown levels, moving from Level 4 to Level 3 of lockdown, plans for the opening of universities were initiated.

“From 1 June, all institutions will be offering forms of remote multimodal flexible teaching and learning, supported by approved resourced plans.”

“Under Level 4 of lockdown, the strictly controlled phased-in return of final year undergraduate students in programmes requiring clinical training begins, with MBChB students having been the first, from 11 May.”

News24, 14 May 2020, Jan Gerber¹²

“At universities – under Levels 3 and 2 – groups of undergraduate and postgraduate students would be phased in. Under Level 1, all students would return to campuses, with physical distancing and health protocols still in place.”

News24, 23 May 2020, Nicole McCain¹³

Impetuous Strategies and Practices

In contrast to the administrative inequalities and management’s ill-preparedness described by the research participants, some universities actively responded to the COVID-19 pandemic, i.e., the University of KwaZulu-Natal (UKZN) launched a health ‘war room’ “*to lend a hand in the fight against the global outbreak of the novel coronavirus*.”

“the ‘war room’ will provide the necessary evidence and guidance to effectively respond to COVID-19, and this may include a policy of quarantine, including self-quarantine, in all possible cases of exposure. . .”

News24, 3 March 2020, Canny Maphanga¹⁴

Universities advised that should a student test positive for COVID-19, the university will not test all students, instead students were asked to self-isolate at home. Students were encouraged to follow all hygiene practices to stop the spread of the virus.

Complex Domain

The complex domain is characterized by unpredictability and change, where cause and effect are only understood in hindsight. Both the online media and the CAE findings revealed that HEIs became accustomed to the ‘new normal’ which entailed changing the ways of doing things and plans day-to-day. The sub-themes that manifest in the complex domain include wicked problems, surveys to students and staff, confliction and dismay. Multi-skilled task forces describe the action taken in this domain.

⁹<https://www.news24.com/news24/southafrica/news/coronavirus-some-varsities-shut-doors-others-wait-following-ramaphosas-address-20200316>

¹⁰<https://www.timeslive.co.za/news/south-africa/2020-04-06-covid-19-universities-consider-reconfiguring-academic-year-to-match-that-of-northern-hemisphere/>

¹¹<https://www.dailymaverick.co.za/article/2020-04-17-universities-gear-up-to-save-the-academic-year/>

¹²<https://www.news24.com/news24/SouthAfrica/News/blades-plan-to-save-the-academic-year-20200514>

¹³<https://www.news24.com/news24/southafrica/news/lockdown-level-3-blade-nzimande-to-give-update-on-plans-for-tertiary-institutions-20200523>

¹⁴<https://www.news24.com/news24/SouthAfrica/News/ukzn-to-launch-health-war-room-to-help-with-fight-against-coronavirus-20200303>

Probe

Wicked Problems

The CAE findings revealed that wicked problems were experienced. These included the work-life balance experienced by staff and changes related to research practices.

The participants reflected on the difficulties associated with *working from home*. The participants expressed that they found it challenging to manage their work responsibilities and the responsibilities related to their home life, all while working from home. The CAE findings revealed that the *increase in workload* and the expectations from those in management and leadership positions were experienced as strenuous by the participants. This was compounded by the rapid turnaround of providing feedback and information to and from management, which was further amplified by having to cope with home input (i.e., childcare, elderly care, looking after a sick family member, job and other losses).

Furthermore, as the pandemic lockdown continued and social distancing became the 'new normal', *research practices* needed to change. Participants indicated that qualitative data collection needed to be shifted into the online space, with subsequent changes to ethics clearance. Interviews were slightly easier, whilst focus groups proved difficult. Neither researcher nor participants seemed entirely clear on what needed to happen. Participants experienced that using online methods for data collection was different, and that the 'who' and 'how' of research sample groups had changed.

Surveys to Students and Staff

In an attempt to understand student's experiences of remote learning, the online media revealed that one university administered surveys to undergraduate and postgraduate students. This initiative aimed to understand how the COVID-19 pandemic is impacting on students' living experiences and to ascertain the adequacy of university interventions to support students during the COVID-19 pandemic. In the light of the profound socio-economic differences and the digital divide, the University of Cape Town states that:

"the survey results underscore the many daily difficulties that students face in learning remotely, with those who left residences at short notice in March particularly affected (fortunately, some of these students have been able to return to residences for the second semester)."

University of Cape Town, 05 August 2020, Nadia Krige¹⁵

An understanding the daily challenges experienced by students creates an opportunity for universities to adopt a targeted approach to alleviate some of the stressors experienced. The survey results revealed the following challenges:

Challenges include finding a quiet space at home to study, carving out uninterrupted time in between caring for children or other family members, and technology and internet access issues. Interrupted electricity supply also looms large, with some areas suffering intermittent power cuts even before load-shedding resumed countrywide.

The student survey provided valuable feedback for the improvement of course content, structure, support and assessment in the third and fourth terms.

University of Cape Town, 05 August 2020, Nadia Krige¹⁶

Sense

Conflicting Needs

CAE participants felt torn between polarized needs, with no known solution for correctly dealing with the problems. One such case was finding the balance between *business continuity vs academic continuity*. As one participant stated: "The #feesmustfall helped us to get the business continuity in place, but this did not necessarily touch on long-term academic continuity." Specifically, business continuity plans seemed to be more geared towards academics than students, for instance processes were implemented for academics to obtain laptops, data dongles, and access to training for online learning and teaching. However, most students were not equipped with resources nor did they have conducive spaces to study from home.

Another conflicting need was phrased at the *health vs wealth* debate. Participants experienced a constant demand for performance, producing more with less, and needing to adapt to very challenging circumstances in order to comply with the #nostudentleftbehind campaign. Yet, this came at the cost of mental wellbeing and coping resources of staff. Employees felt that there "wasn't space or grace for difficulties" that they were dealing with, whether it was health, well-being or financial concerns.

Dismay

A further significant impact of the COVID-19 pandemic on Higher Education institutions resulted in the postponement, cancellation or virtual graduation of students. This created a degree of dismay and frustration with many students.

"Graduation is a huge milestone in the academic journey. It's a culmination of the years you worked in university, and even before that in high school, when you tried to achieve good marks so you could apply to do the degree that you want. When you get that degree, it's a really big achievement and graduation is a chance to celebrate that."

Times LIVE, 05 April 2020, LWANDILE BHENGU¹⁷

¹⁵<https://www.news.uct.ac.za/article/-2020-08-05-survey-reveals-remote-learning-highs-and-lows>

¹⁶<https://www.news.uct.ac.za/article/-2020-08-05-survey-reveals-remote-learning-highs-and-lows>

¹⁷<https://www.timeslive.co.za/sunday-times/news/2020-04-05-degree-of-dismay-for-many-graduates-missing-ceremonies-over-covid-19/>

A graduation ceremony is a highlight in the life of a student. It represents a celebration where students, parents, sponsors and all stakeholders participate in the success of graduating students, remembering the academic journey, the sacrifices made by family and loved ones and appreciating the support from lecturers and academia and often the huge sacrifice made by students themselves. This is especially true for students from previously disadvantaged dispensations.

Respond

Multi-Skilled Task Forces

It is recognized that the COVID-19 pandemic's infection rate and global spread impact on political, financial and social structures globally. Many universities rapidly activated disaster management committees, devising plans to counter the pandemic's influence as best they could. It is the pandemic's very nature of uncertainty and the unexpected that expose the weaknesses and limitations, challenging these plans. As a result, the online media revealed that central Executive Centre university structures were established to integrate, coordinate and expedite decision-making.

Typically, such a framework could converge in an Executive Centre (decision-making) or nerve centre, which should preferably be convened by the Vice-Chancellor, and include expertise in areas of scenario planning, project management, science (in this particular case it would be virologists and/or epidemiologists), communication, and institutional culture. In order for the Executive Centre (EC) to be effective and fast-moving (with urgency and robust thinking), it should be organised around multidisciplinary task teams, each with key responsibilities.

University of the Free State, 1 June 2020, Prof Francis Petersen¹⁸

To enable these Executive Centers with robust thinking and urgency, multi-disciplinary task teams participated to ensure effectiveness. The Executive Center provides a vehicle to lead under crisis conditions. It enables the university to manage the academic project under longer-term lockdown conditions.

Director of Research at the FHS and research task team coordinator, Dr Yolande Harley, said that following the outbreak of COVID-19 in South Africa and the subsequent lockdown, staff in the faculty received many requests for information about how research should be managed, how researchers could get involved with COVID-19 projects and the "rules" around COVID-19 research in particular.

University of Cape Town, 24 April 2020, Niémah Davids¹⁹

Furthermore, according to the online media, the University of Cape Town (UCT) established a special COVID-19 Research Task Team to serve as the official voice for COVID-19 related research projects, including other interrelated functions in the Faculty of Health Sciences (FHS). The task team is led by the Faculty of Health Sciences Deputy Dean of Research and also includes senior academics in the fields of infectious diseases, human biology, medical virology, public health and family medicine. The task team endeavors to support researchers with COVID-19 projects and the unique 'rules' applicable to COVID-19 research specifically.

Complicated Domain

The complicated domain is characterized by cause and effect, but where there might be multiple correct answers. The decision model is therefore to sense, analyze, and respond. This requires expertise to choose the appropriate answer (i.e., good, rather than best practice). In the findings, the sub-themes that populate this domain include online technology/best solution, experts in online learning show the way, exploring academic/industry partnerships, and African experts offer solutions for education, health and systems.

Sense

Online Technology/Best Solution

Higher education institutions familiar with online teaching and learning shifted to online fully, fairly swiftly, by employing the necessary tools, teaching practices and requirements for online learning. In these cases, the impact on students resulted in much less disruption to continue with their academic programmes. Contrary to this, those institutions who were much less prepared for online teaching and learning struggled to upskill academic staff and students, and at the same time needed huge investment in technology to effect the change to online learning. According to the media findings, online learning requires more than technology and software tools. It demands collaboration, care, preparation, expertise, resources, and learning lessons.

"Four conclusions are worth consideration: Higher Education institutions' agility to effectively adapt to change is contingent on change management skills, preparedness for crises, a sensitivity and willingness to collaborate, offer care and support to staff and students, and lastly, an innovative yet cautious attitude towards employing new and untested educational technology."

The Conversation, March 12, 2020, Shandell Houlden and George Veletsianos²⁰

Experts in Online Learning Show the Way

As it became apparent that technology mediating solutions seem to offer the best solution in current conditions, the data from the CAE indicates *experts were consulted*. Some academics were skilled in online learning and teaching and were used as

¹⁸<https://www.ufs.ac.za/templates/news-archive/campus-news/2020/april/how-do-universities-manage-covid-19>

¹⁹<https://www.news.uct.ac.za/article/-2020-04-24-uct-forms-covid-19-research-task-team>

²⁰<https://theconversation.com/coronavirus-pushes-universities-to-switch-to-online-classes-but-are-they-ready-132728>

champions to assist other staff members. The University's center for innovative education and computer technology was also very helpful in providing on-demand training. From the research perspective, some staff with expertise in online research methodology were able to share experience and knowledge via webinars. Furthermore, health researchers shared information and good practice on hygiene practices (i.e., sanitization, hand-washing, etc.) for those who needed to return to campus.

Similarly, media reports indicate that universities communicated hygiene requirements for staff and students to follow. These measures included social distancing recommendations, deep cleaning, suspending the use of biometric access control systems with access card systems, and providing hand sanitizers at all access points. Also, contact tracing and communication with the family of infected students and staff are imperative to delay the spread of the COVID-19 pandemic.

In response to the pandemic, and taking lessons learned from China, it was evident that stringent hygiene practices is one of the preventative measures in dealing with the spread of the pandemic (WHO, 2020).

Analyze

Academia/Industry Partnerships Explored

Politicians engaged, seeking to partner with banks, specially to support the missing middle students.

“Nzimande said he has begun looking into partnerships with banks to provide loans for those students at the beginning of the academic year. He said the engagements were ongoing. In the interim he recommended students look for loans from banks.”

TimesLIVE, 30 april 2020, TimesLIVE²¹

Minister Nzimande's aim is to avail students access to student loans. Furthermore, the minister considered how to overcome the barrier to supply students with technology and devices. His concern was that demand will outstrip supply and suppliers will not be able to deliver on the required quantities needed. The solution might be to distribute laptops in phases over time. The department of Higher Education will also work with network providers to supply students with data.

Respond

African Experts Offer Solutions for Education, Health and Systems

In an effort to combat the pandemic, universities themselves have responded to the COVID-19 pandemic in various ways. On the African continent, there have been a number of initiatives to find solutions to manage and combat the COVID-19 pandemic. Ibrahima Gueye, a professor at the Polytechnic School of Thies in Senegal and one of a 12-member team, said:

“Africans must find their own solutions to their problems. We must show our independence.”²²”

This sentiment has been echoed across the African continent, where medical equipment and supplies are typically imported. A biomedical engineer Bilisumma Anbesse is a volunteer in Ethiopia upgrading and repairing old ventilators. Due to high demand their order for 1,000 new ventilators has been delayed. In Dakar, Institut Pasteur is working with the British biotech company Mologic to develop a rapid test for COVID-19. Also in Dakar, workers are producing 1,000 face shields per week using laser cutters. In Zimbabwe, alcohol-based hand sanitizers, face masks, gowns and aprons are manufactured. Drone technology is employed in Ghana to distribute vaccines and other medical equipment to remote parts of the country.

Nigeria's President Mr. Buhari is quoted:

“This is a global pandemic: 210 countries and territories across the globe are affected, we cannot expect others to come to our assistance. No one is coming to defeat this virus for us.”

AP News, 11 May 2020, CARLEY PETESCH²³

In South Africa, universities have engaged in a range of initiatives to support the Government's efforts against the pandemic:

Herkulaas Combrink of the Centre for Teaching and Learning at the University of the Free State (*University of the Free State, June 22, 2020, Andre Damons*²⁴) has been working with colleagues to create evidence-based tools to assist provincial and national decision-makers with scientific information regarding the COVID-19 pandemic. The project includes a provincial database for screening and monitoring, and a data pipeline and assembly of hospital information.

Engineers at Wits University have designed protective face shields that can be produced in 3 min. These face shields are delivered to hospitals directly in an effort to alleviate the personal protective equipment (PPE) shortages in Gauteng (*Business Insider SA, 08 april 2020, Jay Caboz*²⁵).

The University of Pretoria's Data Science for Social Impact research group has devised a databank with factual information enabling users' access to real-time updates regarding the COVID-19 pandemic. The ABSA Chair of Data Science at the University of Pretoria, Dr Vukosi Marivate, explains the purpose of the project. He elaborates:

²²<https://apnews.com/article/virus-outbreak-international-news-africa-europe-dakar-66e8d6229ce8cfa535c3db2e821e7753>

²³<https://apnews.com/article/virus-outbreak-international-news-africa-europe-dakar-66e8d6229ce8cfa535c3db2e821e7753>

²⁴<https://www.ufs.ac.za/templates/news-archive/campus-news/2020/june/government-uses-some-of-the-best-available-minds-to-help-with-covid-19-models?NewsItemID=319>

²⁵<https://www.businessinsider.co.za/wits-engineers-designed-a-face-shield-that-can-be-made-in-3-minutes-to-help-hospitals-covid-19-2020-4>

²¹<https://www.timeslive.co.za/politics/2020-04-30-no-contact-teaching-at-universities-but-department-launches-ambitious-online-plan/>

“Once the minister of health and the NICD started publishing their data only in statements, we thought about how other researchers may need to get hold of this information in a more accessible way. As such, group members and collaborators have worked to build tools to automate the data gathering and cleaning as much as possible. Validation is also done through discussions about errors and rectifying them as soon as possible.”

University of Pretoria, 07 april 2020, Masego Panyane²⁶

Their aims are to use data science to seek solutions to social problems, allowing end-users and decision-makers to better understand data science and its limitations.

Simple Domain

Linear causality and patterns of linear causality are known and well established in the simple domain. This is the realm of “known knows”, evident in the process of sense, categorize (as a process to organize and understand facts) and respond. Clear cause and effect relationships manifest as sub-themes, i.e., predict pandemic practices, systematic divide still evident and not so different to #feesmustfall.

Sense

Systemic Divide Still Evident

Some universities were better prepared to convert from face-to-face to online learning. Many believe this is the result of an historic legacy where previously disadvantaged universities have much catch-up to do and will require huge investment in technology and skills. Some debates in the media highlight the differential by calling for a national and institutional strategy as opposed to a polarizing discourse of blame.

A heated debate is raging in the media and social media, arguing how the rush to “online” learning is going to leave students behind, “lead to failure” and that the move to online will deepen the inequality fault-lines between, and within our universities. We currently have a highly unequal higher education sector and there is a deep concern that the Covid-19 crisis will sharpen this.

DAILY MAVERICK, 03 May 2020, Suellen Shay²⁷

Predict Pandemic Practices

As the COVID-19 pandemic reached South Africa, many other countries such as China and Italy had already experienced a surge in COVID-19 infections. By keeping an eye on pandemic practices and strategies in these countries, CAE participants experienced *predictability* in what could be expected in South Africa. For instance, it was expected that a lockdown would be announced based on the success this had in other countries. Having various experts at the university, those who experienced,

and were part of research teams for previous pandemics shared the process and necessary protocols.

The importance of research and research teams were emphasized in the media. Specifically, there was consensus among stakeholders that research investment is South Africa’s best insurance policy against crises.

“The fact that South Africa has skilled researchers who are able to apply their minds towards solutions to the pandemic is testament to the country’s research infrastructure. This is infrastructure that the government, particularly the Department of Science and Innovation, has been pivotal in funding and supporting.”

The Conversation, 08 april 2020, Jabulani Sikhakhane²⁸

Categorize

Not so Different From #Feesmustfall

Participants in the CAE reflected with pride that they were somewhat prepared for the COVID-19 pandemic, as similar arrangements of work from home and online learning were experienced during the #feesmustfall protests. As one participant stated: “We could navigate some of the processes that were required during this time.”

Respond

Communication Used as Tool

In an effort to prepare most universities created an e-mail and hashtag where staff and students could make enquiries regarding the COVID-19 pandemic. A strategy of prevention is better than cure depends heavily on effective communication. Factual and well communicated information combats uncertainty and alleviates the stress caused by the unknown. Professor Nana Poku, UKZN Vice-Chancellor and Principal postulates:

“The threat of the new Coronavirus is compelling motivation why we, as a university, need to constantly be alert and put in place proactive and pro-response mechanisms to combat diseases and illnesses.”²⁹

DISCUSSION

This research aimed to reflect on, and make sense of the events at the beginning of the COVID-19 pandemic in South African HEIs. This sense-making attempt was guided by the graphic representation of the Cynefin framework, which utilizes recommended courses of action/strategies to explain the stages within each domain. These strategies include: probe, sense, categorize, respond and act. The depiction of the study findings on the Cynefin framework is presented as **Figure 1**. It is noted that models, such as the Cynefin framework, are designed to elicit self-awareness and to

²⁶https://www.up.ac.za/news/post_2886280-covid-19-up-research-group-sets-up-databank-to-empower-experts-and-citizens-with-accurate-info

²⁷<https://www.dailymaverick.co.za/article/2020-05-03-online-remote-teaching-in-higher-education-is-not-the-problem/>

²⁸<https://theconversation.com/investing-in-research-is-south-africas-best-insurance-policy-against-crises-135706>

²⁹<https://www.universityworldnews.com/post.php?story=20200307100555218>

develop descriptive capability from which action can be determined through collective understanding. Therefore, the borders between the domains are fluid and represent an amalgamation of understanding bound in specific time and space (Snowden, 2000).

The findings from both the media and the Collaborative Autoethnography highlight the evolution of events, their requisite experiential aspects as well as the actual practices engaged in by staff and students within HEIs in South Africa. The graphic representation demonstrates this. At the heart and the start of the pandemic, everything was in disarray with dire inequities being exposed. The disorder was palpable and challenging to deal with for both staff and students.

The findings in the chaotic domain highlighted an *act > sense > respond* configuration. In other words, this tumultuous situation invoked immediate actions like remote learning and some HEIs attempting to return to campus. In line with the Cynefin framework, directive leadership is needed in this domain. The actions reflect such directive leadership, i.e., reconfiguring the academic year, developing risk-based plans and designing some impetuous strategies. Only once actions were taken, it was sensed that there was a lack of preparedness and it was evident that South African HEIs were confronted by extensive inequities once again.

Whilst this is what was reported in the media, the unbridled experience of those within Higher Education provide a narrative of the traits of the chaotic dimensions where there are no answers and many “unknowables”. The data from the CAE seems to point in the direction of needing to change established ways of working. The situation thus demanded a rethinking of how university staff functioned and necessitated a new way of being in the world of work. The lack of fit-for-purpose strategy led to unstandardized approaches as it relates to human resource management of leave, re-skilling and decisions about no-work-no-pay approaches. Whilst directive leadership was shown to initiate a work-from-home scenario for staff, the difficulty experienced for a small group of executive leaders in HEIs to collect information and make decisions quickly regarding the details of this approach became difficult (Lawton-Misra and Pretorius, 2021). This ushered in a need for a more collaborative style of leadership that became evident in the complex domain (Fernandez and Shaw, 2020). Lawton-Misra and Pretorius (2021) argued that self-awareness, compassion, empathy, vulnerability and agility are essential leadership characteristics to navigate through the crisis. With this being said, it should also be noted that it is not only leaders who have to change their approach, but followers (as self-leaders) also need to adapt their approach.

The complex domain, known for being the space of emergent practice gave rise to innovation and collaborative attempts to create some semblance of order. The probing in this domain indicated the experience of wicked problems experienced by the academics at a South African university. Wicked problems, such as issues related to working and studying from home, and a sharp increase of academic workload were pervasive in this domain. This led to emotional strain for many, as they were dismayed at the circumstances and felt conflicted by opposing needs. It is clear that the traditional way of doing and thinking were no longer effective, and new practices had to be

established. The pandemic crisis required relinquishing control in favor of more collective leadership approaches (D’Auria et al., 2020). To this extent, the findings indicate multi-skilled task forces, some in the form of Executive Centers, were formed to collaboratively propose solutions for the way forward. This is an example of adaptive leadership, where educational leaders need to be prepared to modify or reject strategies with immediacy, if required (Marshall et al., 2020).

The complicated domain presented the quest for best practices, and experts, from various disciplines, were engaged to help. Although technology mediated learning and communication methods were not without problems, these were found to be the best solutions to support the social distancing requirements of the COVID-19 pandemic. In this regard, those with expertise in online learning provided advice and solutions, and were used as champions to help others. It was also recognized that HEIs are not able to solve the problems on their own, and hence partnerships with industry were explored to assist with, for instance, funding and laptops. A positive component that surfaces in this domain is the recognition and appreciation of African solutions. This rise in an Africentric approach, in line with that advocated by the African Union, calls for “African solutions for African problems” (Figuremariam, 2008). The ability of Africans to develop solutions for online learning, ventilators, drones, creation of face shields and information technology solutions show what Nathan (2013) describes as self-reliance, responsibility, pride and ownership as Africans.

In the sense-making process, little evidence was found to populate the simple domain. This is to be expected due to the uncertainty and lack of order experienced at the beginning of the COVID-19 pandemic. What helped the university staff in our sample was to look at the pattern of Covid-19 infections in countries such as China and Italy, in order to predict patterns of what is likely to happen in South Africa. Various researchers situated in HEIs had previously helped to manage pandemics, including HIV/AIDS, and were able to normalize the pandemic protocol. The importance of communication in this domain echoes Calonge et al. (2021) research who employed the Cynefin Framework in Higher education to investigate the suitability of communication strategies for the COVID-19 pandemic. These authors emphasize the importance of social media to communicate with all stakeholders, the challenge to communicate complex issues to diverse audiences, the importance of accurate time-critical information, the importance of students’ involvement, and the imperative of trustworthy, consistency, positive messaging and empathy.

The prior experience of South African academics, having experienced work from home and other business continuity practices during the #feesmustfall protests, felt some sense of comfort in the similarity of approach, although it differed in many other regards. However, Sosibo (2020) argues that prioritizing remote teaching and learning needs after the #feesmustfall movement would have better prepared HEIs to respond to the Covid-19 pandemic. The unfortunate realization

in this domain is that the systemic divide in South Africa is still present. This makes the current situation with HEI's more challenging on many levels. Thus, while linear causality and patterns of causality characterize this domain, the nature and the uniqueness of this pandemic highlighted the established pattern of systemic divisions.

Lessons Learnt

The first lesson learnt was the importance of working through a sense-making process. For the participant-researchers involved in the CAE session the discussions provided an opportunity to share experiences and emotions, as well as a framework for deciding on next steps. It is therefore recommended that such reflective debriefing processes should be followed in departments and faculties as HEIs prepare for a return to campus.

Another lesson learnt is that people demonstrated resilience during the COVID-19 pandemic (although this is only evident in hindsight) and HEIs were able to adapt quickly. Whilst many universities were still thinking of blended and online learning approaches, the COVID-19 pandemic fast-tracked learning and the execution of remote emergency learning and online learning by a number of years (Srivastava, 2020). Academic staff demonstrated resilience by fast-tracking online teaching and learning, administrative staff adapted by employing online processes, and students adapted by upskilling and using laptops and software to facilitate learning.

Collaboration and team efforts are key factors in succeeding during a time of crisis. This was especially evident in the complex domain. However, one component that was missing in the media findings as well as the CAE, was collaboration between and across HEIs. From the approach of global citizenship, where networking and collective efforts are pivotal to seeking universal solutions, there may have been many opportunities where HEIs could have pooled resources and expertise to advance South African (and possibly African) Higher Education collectively. Buitendijk et al. (2020) argue that global cooperation is needed to rethink higher education and research.

Leaders and self-leaders should change their approaches to work and working with colleagues. Social norms have changed as staff have grown accustomed to online modes of interaction. During online modes of interaction, staff are accountable to deliver on quantifiable outputs within specified timeframes as opposed to face-to-face modes of interaction where the norm is often defined by time spent at the office. Student and staff well-being, and especially mental health during lockdown, has become another important factor. Advice and information on the pace of work and study routines, staying in regular telephone or video conferencing contact with family and friends, exercise, and a work-fun balance are all imperative to sustain health and productivity during the lockdown period.

In conclusion, HEIs need to take care when reintegrating staff and students on campus. It would be important to have a clear return-to-work strategy, with the necessary emotional and social support offered to students and staff.

Limitations and Recommendations

One of the major challenges in conducting this study related to the rapidly changing nature of the pandemic. Information became obsolete very quickly with changes on many levels occurring rapidly. With the rapid review, the information had to be gathered at a fast pace from all print media. Furthermore, the online media may not have provided a comprehensive picture of the events that took place during the initial phase of the COVID-19 pandemic. In addition, the lack of inclusion of institutional documentation such as protocols or policies that address the COVID-19 pandemic is a challenge. Whilst this would have provided insight on how South African HEIs made sense of the COVID-19 pandemic from the institutional perspective, these policies did not exist or are only in development as HEIs navigate the unprecedented and unpredictable nature of the COVID-19 pandemic. It is recommended that future research be conducted that reviews institutional documentation to identify how institutions made sense of the COVID-19 pandemic. Nevertheless, the final analysis and incorporation of the CAE process granted the researchers the opportunity to distil the information into a meaningful picture.

The expertise of the research ranged from novice to established researchers. A few of the researchers were from SubSaharan African countries and a few challenges arose in terms of connectivity. This essentially contributed to fewer researchers being involved in the data collection process over quite a compressed period of time.

The CAE component of the study was conducted at one university only, making the conclusions very specific to that institution. However, there may be issues that other institutions will be able to identify with and draw on the lessons learnt from the studied institution.

CONCLUSION

The start of this project coincided with the start of the pandemic, whilst the concluding collaborative autoethnography group session came at a time when return to campus was considered. Thus, this paper offers valuable insights to both ends of the spectrum as it highlights the evolution of processes taking place at multiple levels from government policies to institutional practices, as well as to how this impacted on both staff and students. The Cynefin framework demonstrated a range of sense-making efforts from the disordered domain, revealing that HEIs were in disarray, vulnerable and faced many uncertainties; to the chaotic domain which reflected inequalities, change in ways of working to trying to reconfigure the academic year. The complex domain revealed that HEI's became accustomed to the new normal by dealing with wicked problems, to eventually relying on expert assistance to navigate the virtual university space reflected in the complicated domain. Finally, trying to establish causality in the simple domain proved challenging as the information available during the time was sparse.

Despite these challenges, the study underscores many important lessons for HEI's. For example, the importance of the sense-making process among all academic staff. Collaboration and team efforts were found to be critical to managing the Covid-19 crisis period. Given the immense disparities exposed by this pandemic, it is in the best interest of all HEI's to pool resources and expertise. In this way, all can benefit and possibly achieve the aim of #leavenopersonbehind.

Lastly, the study provided some insights regarding the usefulness of employing a rapid review by facilitating knowledge synthesis within a time sensitive phenomenon. This process also enabled the effective and efficient identification of evidence to support the research. Furthermore, the Cynefin framework demonstrated the practical use of this method where sensemaking of complex events prevail. These insights provided real-time guidance for appropriate action and to mitigate risk accordingly. The study assists to provide an understanding of how these methods benefit research, theory and practice.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by University of the Western Cape Human and Social Sciences Research Ethics Committee. The patients/participants provided their written informed consent to participate in this study.

REFERENCES

- Bradshaw, C., Atkinson, S., and Doody, O. (2017). Employing a Qualitative Description Approach in Health Care Research. *Glob. Qual. Nurs. Res.* 4. doi:10.1177/2333393617742282
- Bryce, C., Ring, P., Ashby, S., and Wardman, J. K. (2020). Resilience in the Face of Uncertainty: Early Lessons from the COVID-19 Pandemic. *J. Risk Res.* 23, 880–887. doi:10.1080/13669877.2020.1756379
- Buitendijk, S., Ward, H., Shimshon, G., Sam, A. H., Sharma, D., and Harris, M. (2020). COVID-19: an Opportunity to Rethink Global Cooperation in Higher Education and Research. *BMJ Glob. Health* 5 (7), e002790. doi:10.1136/bmjgh-2020-002790
- Calonge, D. S., Aguerrebere, P. M., Hultberg, P., and Connor, M. (2021). Were Higher Education Institutions Communication Strategies Well Suited for the COVID-19 Pandemic? *Jel* 10 (4), 1. doi:10.5539/jel.v10n4p1
- Chang, H. (2013). "Individual and Collaborative Autoethnography as Method," in *Handbook of Autoethnography*. Editors Jones, S. H., Adams, T. E., and Ellis, C.. (London: Routledge), 107–122.
- D'Auria, G., Nielsen, N. C., and Zolley, S. (2020). *Tuning in, Turning Outward: Cultivating Compassionate Leadership in a Crisis*. Atlanta, US: McKinsey & Company.
- Dikid, T., Chaudhary, S., Goel, K., Padma, P., Sahu, R., Kumar, T., et al. (2020). Responding to COVID-19 Pandemic: Why a strong Health System Is Required. *Indian J. Med. Res.* 151 (2), 140–145. doi:10.4103/ijmr.IJMR_761_20
- Fernandez, A. A., and Shaw, G. P. (2020). Academic Leadership in a Time of Crisis: The Coronavirus and COVID-19. *J. Ldrship Stud.* 14 (1), 39–45. doi:10.1002/jls.21684
- Figuremariam, S., and ISS Africa (2008). African Solutions to African Problems. Available at: <https://issafrica.org/iss-today/african-solutions-to-african-problems>.
- Ganon-Shilon, S., and Schechter, C. (2017). Making Sense of School Leaders' Sense-Making. *Educ. Manage. Adm. Leadersh.* 45 (4), 682–698. doi:10.1177/1741143216628536
- Govindarajan, V., and Srivastava, A. (2020). What the Shift to Virtual Learning Could Mean for the Future of Higher Ed. *Harvard Business Review*. Available at: <https://hbr.org/2020/03/what-the-shift-to-virtual-learning-could-mean-for-the-future-of-higher-ed>.
- Krishnamurthy, S. (2020). The Future of Business Education: A Commentary in the Shadow of the Covid-19 Pandemic. *J. Bus Res.* 117, 1–5. doi:10.1016/j.jbusres.2020.05.034
- Kurtz, C. F., and Snowden, D. J. (2003). The New Dynamics of Strategy: Sense-Making in a Complex and Complicated World. *IBM Syst. J.* 42 (3), 462–483. doi:10.1147/sj.423.0462
- Lambe, P. (2007). *Organising Knowledge: Taxonomies, Knowledge and Organisational Effectiveness*. Oxford: Chandos.
- Lawton-Misra, N., and Pretorius, T. (2021). Leading with Heart: Academic Leadership during the COVID-19 Crisis. *South Afr. J. Psychol.* 51, 205–214. doi:10.1177/00812463211992979

AUTHOR CONTRIBUTIONS

MdP conceptualized the article and the use of the theoretical framework; took part in the media rapid review and facilitated the collaborative autoethnography session. She actively contributed to the content development and finalization of the article. CJvV and AS worked together throughout the media findings analysis process, which was an iterative one. A narrative was developed to describe the themes under each domain. JF and NR contributed to the critical reading, coherence and editing of the article. MA was part of the conceptualization process, particularly the collaborative autoethnography component. She contributed to the overall writing, editing and overseeing the coherence and writing of the ideas.

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- Marshall, J., Roache, D., and Moody-Marshall, R. (2020). Crisis Leadership: A Critical Examination of Educational Leadership in Higher Education in the Midst of the COVID-19 Pandemic. *CCEAM* 48 (3), 30–37.
- Nathan, L. (2013). African Solutions to African Problems: South Africa's Foreign Policy. Available at: https://repository.up.ac.za/bitstream/handle/2263/42486/Nathan_African_2013.pdf?sequence=1.
- Northcutt, N., and McCoy, D. (2004). *Interactive Qualitative Analysis: A Systems Method for Qualitative Research*. Thousand Oaks, CA: Sage Publications. doi:10.4135/9781412984539
- Pillay, S. R. (2016). Silence Is Violence: (Critical) Psychology in an Era of Rhodes Must Fall and Fees Must Fall. *South Afr. J. Psychol.* 46 (2), 155–159. doi:10.1177/0081246316636766
- Rashid, S., and Yadav, S. S. (2020). Impact of Covid-19 Pandemic on Higher Education and Research. *Indian J. Hum. Dev.* 14 (2), 340–343. doi:10.1177/0973703020946700
- Roman, N. V., and Frantz, J. M. (2013). The Prevalence of Intimate Partner Violence in the Family: a Systematic Review of the Implications for Adolescents in Africa. *Fam. Pract.* 30 (3), 256–265. doi:10.1093/fampra/cms084
- Sahni, H., and Sharma, H. (2020). Role of Social media during the COVID-19 Pandemic: Beneficial, Destructive, or Reconstructive? *Int. J. Acad. Med.* 6 (2), 70. doi:10.4103/IJAM.IJAM_50_20
- Snowden, D. (2000). Cynefin, a Sense of Time and Place: an Ecological Approach to Sense Making and Learning in Formal and Informal Communities. Available at: <http://citeseerx.ist.psu.edu/viewdoc/versions?doi=10.1.1.196.3058>.
- Snowden, D. (2010). "Knowledge Theory Perspectives on Place Branding," in *International Place Branding Yearbook 2010*. Editors Go, F. M., and Govers, R.. London: Palgrave Macmillan. doi:10.1057/9780230298095_4
- Snowden, D. J., and Boone, M. E. (2007). A leader's Framework for Decision Making. *Harv. Bus. Rev.* 85 (11), 68. www.hbr.org.
- Snowden, D. (1999). Cynefin: A Sense of Time and Place. Institute of Knowledge. Available at: <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.196.3058&rep=rep1&type=pdf>.
- Sosibo, L. (2020). "Redressing Inequalities while Envisioning University Student Teaching during COVID-19 Lockdown: Lessons from #RhodesMustFall and #FeesMustFall," in *Teaching and Learning in Higher Education in the Time of Covid-19. Alternation African Scholarship Book Series, #3*. Editors N. Mkize, N. Ndimande-Longwa, L. Ramathan, and J. A. Smit (Pietermaritzburg: CSSALL).
- Srivastava, P. (2020). COVID-19 and the Global Education Emergency. Available at: <https://oxfamblogs.org/fp2p/covid-19-and-the-global-education-emergency/>.
- Toquero, C. M. (2020). Challenges and Opportunities for Higher Education amid the COVID-19 Pandemic: The Philippine Context. *Pedagogical Res.* 5 (4), em0063. doi:10.29333/pr/7947
- Tricco, A. C., Langlois, E., and Straus, S. E. and World Health Organization (2017). *Rapid Reviews to Strengthen Health Policy and Systems: A Practical Guide*. Geneva: World Health Organization.
- Van Beurden, E. K., Kia, A. M., Zask, A., Dietrich, U., and Rose, L. (2013). Making Sense in a Complex Landscape: How the Cynefin Framework from Complex Adaptive Systems Theory Can Inform Health Promotion Practice. *Health Promot. Int.* 28 (1), 73–83. doi:10.1093/heapro/dar089
- Wangenge-Ouma, G., and Kupe, T. (2020). Uncertain Times: Re-Imagining Universities For New, Sustainable Futures. Available at: <https://www.usaf.ac.za/wp-content/uploads/2020/09/Uncertain-Times-Paper.pdf>.
- WHO (2020). Covid Strategy Update. Available at: <https://www.who.int/publications/i/item/covid-19-strategy-update-14-april-2020>. (Accessed April 2020).

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