COVID-19 Crisis Response of Higher Education Institutions: Tampere University (TAU) and University of São Paulo (USP)

Uliana Furiv, Vuokko Kohtamäki, Elizabeth Balbachevsky, Sirpa Virta

INTRODUCTION

This chapter considers the COVID-19 pandemic as a crisis to which the world and organizations have responded differently. The impact of the crisis on higher education institutions (HEIs) has been enormous. In the early months of the pandemic, more than 20,000 HEIs suspended or postponed teaching and research activities, affecting more than 200 million students worldwide in more than 200 countries (Brown, 2020).

HEIs used a variety of strategies to limit the spread of COVID-19, the most common approach being to move teaching and learning activities online. However, many HEIs lacked the technological resources and preparedness of staff and students to adapt to new educational delivery modes. The World Bank estimates that the impact of the pandemic on higher education was exacerbated by insufficient preparedness of HEIs. Very few institutions had pre-existing plans to respond effectively to the crisis (World Bank, 2020).

The existing literature on HEIs' responses to COVID-19 is fairly generic and does not provide a more in-depth analysis of their responses. This chapter aims to fill this gap by examining the initial response to COVID-19 by two case universities - Tampere University in Finland and the University of São Paulo in Brazil. The authors focus on the timeframe from January 2020 to May 2020. Brazil is one of the largest Latin American countries, and Finland is a small country in a group of Nordic countries. They have different cultures, histories and socioeconomic conditions. Despite these differences, HEIs in both Finland and Brazil played an important role in the continuity and sustainability of their societies during the pandemic. This chapter analyzes how the two institutions responded to the COVID-19 crisis and considers differences in institutional approaches.

The authors use a crisis management framework, which comprises three basic stages: pre-crisis, crisis and post-crisis, widely used in crisis response studies of private and public organizations, including HEIs (Drennan and McConnell, 2007; Drennan, McConnell and Stark, 2015; Pursiainen, 2018). As the COVID-19 crisis is still ongoing and HEIs are still in the midst of it, it is impossible to analyze all three stages of crisis management. In this chapter the authors will focus on the first two stages of crisis management and their components – pre-crisis (crisis assessment, prevention and preparedness) and crisis (response).

BACKGROUND

The international response of HEIs to COVID-19

The higher education sector was one of the most affected sectors during COVID-19. Obviously, in this context, many universities were forced to close their full-time operations. Nevertheless, there is considerable variation among countries and universities with respect to their response.

HEIs that prior to the pandemic already had the technical capacity and human resources to organize online and distance education were better prepared to ensure continuity of learning and teaching activities. On the other hand, universities that relied on face-to-face instruction and did not have pre-built digital

capacity were forced to virtually suspend all teaching and research activities (Hommel, 2020; UNESCO, 2020).

In the early stages of COVID-19, many higher education systems had trouble communicating crisis information, which was confidential information. The speed of communication as well as the accuracy of the information was vital. Information about the actions taken by HEIs had to be updated regularly to help higher education stakeholders respond correctly to the crisis (Hommel, 2020). To support European universities' response to COVID-19, the European Association for International Education summarized the 'courses of action' that universities took in response to the crisis in Europe. Channels of communication with students to support them in obtaining counseling, health services, and funding when needed, as well as active communication with external partners and the local community, are some of the initiatives taken by universities in response to the crisis (EAIE, 2020).

In the United States, the Centers for Disease Control and Prevention has prepared an interim guide for administrators at U.S. HEIs called Planning, Preparing, and Responding to Coronavirus Disease 2019 (CDC, 2020). Globally, several HEIs have begun preparing organizational continuity plans for students and staff to ensure they can stay online (EAIE, 2020). Some universities have begun to develop policies for study abroad programs to mitigate the loss of international students. Institutions of higher education have also begun to strengthen or build digital infrastructure to move their courses online and keep students from meeting face-to-face. MIT created a crisis planning group with various working groups to respond to COVID-19. The group met several times a week to develop specific continuity plans for academic and research activities, business continuity, and student response and communication (MIT News Office, 2020).

Illanes, Law, Mendy, Sanghvi, and Sarakatsannis (2020) also highlight the uniqueness of the higher education COVID-19 response. The authors note that in addition to being educational, teaching, and research institutions, HEIs also function as "small cities, complete with police forces, energy plants, sports facilities, and other civic institutions". They also participate in local and regional economies, run hospitals, and contribute to local health systems. The aforementioned limitations imply that universities answer to a large group of stakeholders with diverse interests. Thus, a broad coordination of responses was needed during COVID-19. The authors emphasize that leadership from the top was critical in times of the crisis. Continuous communication with stakeholders and working teams throughout the crisis was also very important.

Crisis management framework

Since HEIs have traditionally been relatively safe environments, it is not surprising that research on crisis management in higher education is not as pertinent as in the corporate sector (Houston, 2017). A common crisis management framework applied to higher education is still lacking. This chapter will present a crisis management framework that has been largely derived from research on crisis management in the public and corporate sectors.

Crisis management is a broad field. It is relevant to many contexts and disciplines such as social welfare, political science, public policy and administration, organizational studies, engineering, health sciences, among others (Pursiainen 2018, p.2). Crisis management is an approach used by individuals or organizations to deal with a crisis that involves making critical decisions within a critical time frame and using the best available information. The concept of crisis management involves anticipating and managing the devastating effects of a crisis, which can threaten the lives of an organization or individuals, through

collaboration between key stakeholders who share a common understanding of the concept of crisis, its effects, and the management approaches, roles and responsibilities to be undertaken.

The primary goal of crisis management in higher education is to guarantee the continuity of the HEI's core tasks, responsibilities, and functions (Whitman and Mattord, 2003; Spillan and Hough, 2005). The crisis management system used in higher education follows the established model presented by Fink (1986) and Mitroff (1994), which outlines crisis management as a cycle consisting of three main stages: pre-crisis, crisis and post-crisis. The first stage, the *pre-crisis stage*, is concerned with assessing, preventing and preparing for the crisis. The *crisis stage* is related to the response to the crisis. The *post-crisis stage* involves recovery and learning from the crisis (Drennan & McConnell, 2007; Andrews, 2012; Pursiainen, 2018). The latter stage is critical because it can help organizations improve their approaches to crisis management in the future. However, organizations, including HEIs, usually do not pay enough attention to this stage. Thus, crisis management is a set of related events and responses that may not be undertaken in a strict sequence (Spillan & Hough, 2005). It is difficult to establish clear boundaries between the stages of crisis management - when one begins and another one ends.

To effectively manage a crisis, an organization must be able to identify the type of crisis and the degree of intervention needed to prevent loss. The concept of crisis is used differently in different disciplines, fields or contexts. Simply put, a crisis is a condition that occurs when risks and threats are actualized in a particular environment. In the field of higher education, crisis has been conceptualized by Zdziarski as "an event, which is often sudden and unexpected, that disrupts the normal operations of the institution and its educational mission, and threatens the wellbeing of personnel, property, financial resources, and/or reputation of the institution" (Zdziarski, Dunkel and Rollo, 2007, p.5). Crisis can affect all members of the university community, research and project participants, collaborators, including those groups of people who attend or work in university-owned facilities and buildings (see, for example, Andrews, 2012; Beggan, 2011).

There are different types of crises, and due to the high degree of uniqueness of many crises, their classification can be difficult (Drennan et al., 2015). Kouzmin and Yarman (2004) note that crisis events share similar characteristics, such as serious threat, destructive nature, and life-threatening environment, but each crisis may differ in the level of threat. A better understanding of crisis as a phenomenon can be achieved by examining some of its classifications. Spillan (2000) classifies crises into five categories - organizational, internal, external, natural, and technological threats. In the context of higher education systems, a crisis can be categorized as organizational or operational, as it includes events that interrupt the normal operations of HEIs. Hough and Spillan (2005) listed several organizational/operational crises (e.g., hostile takeover, product tampering, fatal accident, copyright infringement, environmental leakage, computer hacking, natural disaster that destroys the organization's information base, terrorist attack, sexual harassment, attacks on staff). The types of risks and crises listed are by no means exhaustive. They can go beyond what is expected and conceivable, which is sometimes the case, as evidenced by the COVID-19 pandemic. The above typologies are intended to demonstrate the variety of crises and types of threats a crisis can contain, but the list is certainly not exhaustive. A number of researchers (Spillan, 2005; Zdziarski, et al., 2007; Drennan et al., 2015) emphasize that a particular crisis can border on many classifications. Hence, any crisis is highly context-dependent.

COVID-19 can be described as a sudden and unpredictable event that affected virtually every aspect of higher education operation worldwide. The pandemic disrupted key HEI operations such as teaching, learning, and research. While it is important not to ascribe only one classification to this crisis, in the context of this research, COVID-19 is seen as an operational crisis. Hence, the research analyses how the crisis

affected the operations of the two case universities and how the universities responded to and managed the immediate first months of COVID-19 crisis in Finland and Brazil.

The crisis response of the case universities in this chapter is analyzed using the above-mentioned crisis management framework. This includes an analysis of the pre-crisis (crisis assessment, prevention, and preparedness) and crisis (response) stages. The crisis management literature notes that a comprehensive crisis response should include formal processes, protocols, and structures such as a detailed crisis management plan, crisis management team, and communication plan (Pursiainen, 2018; Zdziarski et al., 2007; Burrell & Heiselt, 2012; Eaker & Viars, 2014; Beggan, 2011; Gustafson, 2017). The definitions of the concepts are provided below:

- *A crisis management plan* (or continuity plan) is a verifiable crisis plan that models crisis events, defines crisis organization and preparedness, and identifies potential crisis responses. A crisis management plan is often specific to each university. However, those responsible for creating the plan may be guided by some general principles. It should allow for real-time decision-making at the central and decentralized levels. It must consider all three stages of crisis management (pre-crisis, crisis, post-crisis).
- *A crisis management team* is a group of specialized individuals responsible for preventing and responding during a crisis in an organization. Crisis management teams should be established before a crisis occurs. This allows for crisis prevention and a more coordinated response during a crisis. Crisis teams require an understanding of their roles and responsibilities and adequate training.
- *Crisis communication* is an action that take place in all phases of crisis management to inform individuals, communities, and organizations about the (potential) crisis and crisis management strategies. Crisis communication is a necessary horizontal and vertical factor in all phases of crisis management, but especially in the response phase. Communication between different levels of the university structure, within departments and different academic groups before and during a crisis is critical to a coordinated institutional response during the crisis.

METHODOLOGY

The overarching objective of this research was to generate knowledge about the existing crisis management practices in higher education more broadly. Specifically, the research intended to explore the following research question: How did universities respond to and manage the immediate first months of COVID-19 crisis in Finland and Brazil?

Research approach

This study takes an exploratory approach with a different systems design (Anckar, 2008; Goertz, 2017). It is exploratory in nature, as it seeks to explore the existing crisis responses in two diverse higher education contexts during the COVID-19 crisis. Two very different cases were chosen for comparison: a medium-sized research-intensive university in a developed country and a large research-intensive university from the global South. As Kohtamäki and Balbachevsky (2019) point out, Tampere University (TAU) in Finland, and the University of São Paulo (USP) in Brazil are research-intensive universities that play an important role in national higher education systems. Both also have similar levels of institutional autonomy. In both cases, the universities are funded largely by public funds, but the management of these funds is an internal

matter. One key difference between the universities relevant to this study has to do with the internal governance and management system; while TAU has reformed its internal governance and management largely in line with the basic principles of the new public administration system (Brunsson & Sahlin-Andersson, 2000), the USP governance system model is largely traditional collegial.

At TAU, the Board is the highest decision-making body; it makes decisions on institutional strategy, budget, rules, organizational structure, and internal governance. The Board appoints the rector, provost, two vice-rectors, and deans. TAU's legislation and the internal regulations define the Board's duties. The university board has seven members, of which six are external. Also, the Chair of the university board is an external member. The rector is responsible for university operations and finances. TAU also has a multi-member body; the academic council, which consists of representation of the internal staff and students. It makes policies related to teaching and education. TAU has seven faculties, and each faculty also has a faculty council. Faculty councils decide the faculty's teaching and research. Deans run the academic operations and finances of their faculties.

At USP, senior leadership is selected through an electoral process, and academics, especially full professors, play a central role. In keeping with the traditional collegial system, most leadership positions are held by academics appointed by the rector or mandated through electoral processes. USP also exhibits a high degree of decentralization. While provosts play an important and central role in critical areas of university governance, university units also have a high degree of autonomy. Their heads are selected through internal elections at the unit level, and each unit also manages its own budget according to general guidelines approved by the University Senate. USP's financial autonomy reinforces the university's decision-making autonomy.

Methods

The authors first reviewed the secondary literature on university crisis response to COVID-19. Because the crisis is recent and still ongoing, much of the available literature was in the form of reports, blogs, short articles, news stories, etc. The advantage of this literature is that it is fresh and relevant, but it lacks the peer review process that normally applies to journal articles. After analyzing the literature, key themes consistent with the chosen conceptual framework were identified. The authors primarily reviewed the literature related to the crisis management process, with emphasis on crisis management components: crisis management plan, crisis management team, crisis communication used in HEIs during COVID-19 to ensure operational continuity.

After reviewing the current literature, the authors focused on the responses of two universities, TAU and USP. Three of the authors represent these universities, so this allowed the authors to gather the necessary data.

TAU's document evidence included the institution's continuity plan (crisis management plan), memoranda, and minutes of institutional crisis management meetings (see Appendix 1). The documentary evidence included pertinent information about TAU crisis management planning and initial responses during a crisis. TAU's evidence also included regular COVID-19 information provided to the entire university community via email and websites. The content of the COVID-19-related information was based on the decisions made by the crisis management team. The university provided access to an electronic platform where all documents and information related to the crisis management and crisis management system were documented and available for this article.

Documentary evidence from USP was collected gradually, as central authorities issued discussions and normative documents regarding the university's response to various aspects of the crisis as it unfolded (see Appendix 2). Most of the documents were widely distributed to all university personnel (both academic and non-academic) via e-mail. The documents are also available on the university's website, although in some cases they are scattered in different sections of the site. Because the decision-making model at USP is more fragmented, different units within the university have responded differently to the challenges of the crisis. Thus, in addition to documents issued by the central office, the study also focused on documentation issued various units, and informal information was gathered with colleagues in those units.

The timeline and context of the organizational crisis response was analyzed through a qualitative data-driven content analysis (Schreier, 2012).

COVID-19 RESPONSE OF TAMPERE UNIVERSITY (FINLAND) AND THE UNIVERSITY OF SÃO PAULO (USP)

Tampere University

TAU is a foundation-run multidisciplinary university that merged with the Tampere Technical University in 2019. Its focus areas are technology, health, and society. TAU has 4,000 staff members and 21,000 students.

TAU's administrative services are organizationally divided into five centralized supporting service areas. Security, safety, and risk management services are part of the supportive services under operative steering and planning. The primary responsibility for the university's functioning, including safety and security lies with its top management. All managers and leaders of service areas, heads of sections (support services), and deans play crisis management roles. The university has safety and security personnel and a security handbook guiding the behavior of all its members. TAU has a specific continuity plan (crisis management plan)[1] defining the crisis management teams, their tasks, responsibilities, and member in charge of decisions in different areas (according to work titles, but without personalizing). The section below describes the crisis management teams and the strategic and operational level teams.

Preparedness and management of COVID-19 crisis

TAU was the first among Finnish universities to deal with the COVID-19 crisis. At the beginning of March 2020, the COVID-19 cases were detected on the university campus. This was an important event when the pandemic tested the readiness of the crisis management plan, teams and crisis management strategies. At this point, no COVID-19 cases had been reported by other Finnish universities. TAU was to take a pioneering role in the context of Finnish universities in responding to the crisis within the university. In January 2020, TAU regularly informed the university community about the COVID-19 situation worldwide and in Finland (see Table 1).

Table 1. Timeline of crisis management events and strategies at TAU

Timeline	Events and strategies
December 2019	• Continuity plan approved by the university.

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[1] The term 'continuity plan' is used to mean a crisis management plan in the Finnish university case.

January 2020	• TAU began monitoring the situation in Wuhan, China, and sending regular updates, instructions regarding traveling to China, instructions to academic community members regarding where to find information related to COVID-19.
February	• TAU began establishing a coordinated pandemic follow-up team and preparing crisis responses.
February	• Rector nominated an incident response team and corona working group.
March 5	• The corona working group made immediate decisions and planned actions related to teaching, facilities, and IT-services, encouraging teleworking.
March 8 - 13	• First COVID-19 cases: Persons exposed to the disease were identified at the university campus.
March 12	• All courses and learning events with more than 100 students needed to be conducted virtually or via other alternative arrangements. In unexpected circumstances classes were to be postponed or cancelled; exams with many students had to be completed in multiple rooms to increase social distancing. Exchange students were recommended to return to Finland. All new student/staff exchange periods and international internships were cancelled. Students were informed by email.
March 13	• TAU began working to issue further guidelines, prepare for teleworking and conducting all meetings online.
March 14	• University's sports facilities to close.
March 16 onwards	• All teaching was to be delivered remotely.
March 16	• Communication inside the university began. Video information for staff and students on all actions how the university would respond to the crisis was issued.
March 17	• Only critical research and development activities, critical support for distance education, and critical support services, such as IT, were allowed to work on campus.
March 18	• All university premises needed to be closed based on the decision of the Regional State Authority (AVI). TAU's library facility was closed.
March 19	• Arrangements were put in place to replace senior leaders and managers in case of COVID-19 absence.
March 23	• Instructions for organizing doctoral public defense via digital platforms were provided by the university.
Ongoing	• Daily updates and information and communication followed: Intra, Twitter, Facebook, corona-portal (questions regarding COVID-19 crisis inside the university community), information regarding HR-issues and employment, occupational wellbeing, insurance policy for teleworkers, etc.

Source: Tampere University, 2021. Corona-virus logbook (see Appendix 1).

TAU's faculties were unit-level players responsible for preparing and responding to the crisis. Their key role was to continue all academic functions and implement the continuity plan and decisions taken at the university and faculty levels.

The first response to the crisis was critical because it revealed the university's approach to preparedness. The university began its risk assessment by analyzing what direct impact COVID-19 might have on the university's operations. TAU's senior leadership took the scope and nature of the crisis seriously from the outset.

Continuity plan (crisis management plan)

Managing the COVID-19 crisis required an immediate response and adaptation of a continuity plan to transition to fully remote operations. The critical approach to a university-wide continuity plan was to systematically prepare for threats and emergencies, and to have the capacity to implement the plan. According to the Act on Universities (2009), all Finnish universities are required to have a continuity plan. The Ministry of Education and Culture checks that each university has such a plan. TAU introduced the continuity plan on January 1, 2020 by decision of the rector. This was a new plan developed recently in conjunction with the university's institutional merger. The plan is not public (based on legislation) and therefore its contents are not given in full here.

The TAU continuity plan indicates decisions and actions to be taken in the event of a crisis. It includes a specification of potential risks and threats, special situations, priorities in special situations, management in special situations, key partners, and plans for facilities and human resources. It provides a framework, guidelines, instructions, and procedures for dealing with contingencies and for faculty and unit continuity plans. In practice, the continuity plan provides a systematic and centrally coordinated organization and approach to crisis response. The coordinated approach addresses crisis organization (teams and individuals), decision-making and communication, and response actions to a potential crisis. Thus, the continuity plan defines basic protocols and procedures for responding – who, when, and where – to events like the COVID-19 crisis.

According to the TAU continuity plan, the two most important priorities are crisis management and communication. The continuity plan identifies management at the strategic level, management at the operational level, and management at the facility level (faculty and operational unit).

Crisis management teams

At the strategic level, the main tasks and responsibilities are to establish an incident response team, which makes important decisions to increase the organization's resilience and resources. Therefore, the rector has appointed three crisis management teams: the incident response team, the pandemic monitoring team, and the corona working group (see Table 1).

The *incident response team* includes the rector, provost, vice-rector for academic affairs, director of risk management and security, and communications development manager. The team also includes a safety and security expert who serves as the chief operating officer.

The *pandemic monitoring team* is designed to plan the response to the crisis, monitor the situation in a coordinated manner, and prepare leadership for action. The team includes representatives from communications, HR, travel services, international mobility, information management, and the security team.

The *corona working group* makes decisions and plans actions and priorities related to teaching, facilities, and IT services, encouraging telecommuting in particular. At one of its meetings, the corona working group consulted a professor of epidemiology, who gave an introductory presentation about the big picture of the epidemic and how it might evolve. The corona working group planned preparedness concerning education, IT-services, cleaning of facilities, travelling, events, conferences, visitors, and so forth, as well as how to guarantee efficient communication during the crisis.

Communication and coordination of response

TAU has a specific crisis communication plan to ensure effective internal communication during a crisis. A critical capacity in the communication plan is to identify critical information, the right time for

communication, and the persons to whom it should be directed. From this perspective, the university consults and monitors information from the national health organization and public authorities. Unifi, the national rectors' council of universities, is a crucial body providing a platform for discussion and information exchange between universities. Universities also collaborate with each other to develop standard guidelines and recommendations. An important strategy is to ensure that all critical issues reach all members of the university community. A variety of crisis awareness sessions have been held regularly for university staff and students, covering teaching, research, human resources, travel and visitors, IT infrastructure, and building. The top leaders practiced implementing crisis communications before actually communicating events to staff and students.

Emergency response: how to ensure that there are no blind spots when communicating to staff and students. (memorandum, corona – working group 10 March 2020)

To ensure the flow of critical information, TAU has intensified communication and consultation with key external stakeholders as defined in the continuity plan. TAU crisis decisions are made in consultation and shared understanding with key external stakeholders to ensure the best available knowledge and information for decision-making. Various online communication channels serve both internal and external members of the university community. The communication plan emphasizes internal communication, but the university provides information through various channels to external members.

Based on the COVID-19 situation, the university created three crisis management teams (described above), implemented intensive communication and increased crisis response capabilities. The TAU incident response team made all critical decisions and operational policies. The incident response team is responsible for the sustainability of TAU. Consultation with external stakeholders focused on the initial management of the organizational crisis, as described below.

At the beginning of the crisis, when the first cases of COVID-19 were identified on campus, TAU immediately consulted with the local university hospital. The situation was then brought to the attention of the university community. The hospital confirmed the COVID-19 cases and contacted the Tampere region while respecting privacy. The university consulted with key external experts (e.g., public authorities) and followed the information of the national health organization and shared this information and all updates with members of the university community using various internal channels. Sharing communications with the local university hospital played a significant role.

Effects on the academic faculty members

Faculty members welcomed the fact that the university responded to the crisis immediately and without delay. Crisis communication reached the faculty effectively, and it was up-to-date information, transparent and understandable. The TAU intranet sufficiently served both Finnish and foreign members of the university community. The faculty obeyed the instructions and moved to remote work without resistance. Communication from the university level was clear and informative. IT support and infrastructure made full remote work possible. The criticality and serious threat of the pandemic was recognized by faculty.

Faculty loneliness followed, and faculty struggled with various IT tasks from the comfort of their homes. The working days were often extended. The loneliness and lack of academic social life was evident. TAU supported employees by, for example, encouraging them to take coffee breaks together remotely and

organizing online exercises to improve well-being (Mäkikangas, Juutinen, Oksanen, and Melin 2021). Mid-level supervisors and managers were completely invisible and had no clear role in managing the situation.

The university professors behaved as a team. Social affiliation was high because each faculty member was in the same situation. International universities and their actions were also monitored by faculty members, giving hints about what might happen in Finland. Colleagues supported each other by communicating, sharing experiences, and providing support in the use of IT technology. Almost everyone had problems connecting to the Internet, cross-country connections, taking notes, or transferring notes to students. Teachers faced a number of prohibitions: no coming to the office, no taking their office chair home, no visiting the library, no organizing in-person classes, no four-hour exams, no traveling, no inviting guests, etc. At the end of the academic year the teachers were tired because working online took up much more resources and time than working in the office (Mäkikangas, Juutinen, Oksanen and Melin, 2021; Mäkiniemi, Oksanen and Mäkikangas 2021).

Employees at TAU pointed out the different experiences associated with remote work. Those teachers and researchers who had experience with remote work also adapted better to working remotely during a crisis. When measuring the level of job involvement, Mäkikangas et al. (2021) found that if work engagement was at least moderate at the beginning of the pandemic, it remained the same or increased during the crisis. If work engagement was low at the beginning of the pandemic, it was the same during the crisis (Mäkikangas et al. 2021).

University of São Paulo

USP is a major research university in the state of São Paulo, Brazil. The university has seven campuses located in different parts of the state and manages cultural sites such as the Historic Museum of São Paulo and the Museum of Modern Art. The USP School of Medicine and Health Sciences is responsible for managing the state's largest public hospital and many other specialized centers. These medical facilities are referral centers located in the core of the extensive local network of medical facilities under the umbrella of the Brazilian National Health Service. The state of São Paulo, Brazil's richest state, maintains a university. Since 1987, the university's main source of income has been a fixed percentage of the state's basic tribute, a tax imposed on all goods and services sold within the state.

Preparedness and management of COVID-19 crisis

The first unit at USP to learn about the risks associated with COVID-19 was the Faculty of Medicine and Health Sciences. In January 2020, a team of scientists from the field began monitoring information about the pandemic appearing internationally. On January 31, 2020, the state governor created an *emergency committee*, to monitor the development of the disease around the world. Some respected medical researchers from USP have been recruited to serve on this committee. Within the university, formal awareness of the growing crisis came later. Table 2 below provides a timeline of the major decisions made by the central administration.

Table 2. Timeline of crisis management events and strategies at USP

Timeline	Events and strategies
March 9	• First case of COVID-19 confirmed at the university's main campus.
March 10	• USP launched a committee to monitor COVID-19 contamination among academics, students, and employees.

	• The rector's office established a COVID-19 working group to coordinate all initiatives related to the disease, including the university's participation in state-level initiatives to deal with the pandemic.
March 11	• University authorities denied the need to close its activities.
March 12	• State's Committee of Contingency declared that community-transmission of the disease had started inside the state.
March 13	• The Federal Ministry of Health advised all states to close schools with community-transmission and restrict events that could cause crowding of people. Following this directive, the state governor decreed a state-level lockdown, closing down all non-essential activities, including the state universities' campuses.
March 17	• The Council of Rectors of São Paulo's State Universities (CRUESP), decided to suspend all teaching, cultural and academic activities on campus from March 17. The Central Administration decided that all senior employees and academics should stay at home and develop home-office alternatives. Following CRUESP, USP's rector promulgated the decision of closing the campuses.
March 17 onwards	• USP urged academics, whenever possible, to direct their research efforts towards fighting the epidemic situation and signal that teaching should move toward online mode.

Source: University of São Paulo (USP) official correspondence issued by the rector's office directed to academics, employees and students (see Appendix 2).

Table 2 provides some evidence of the university's lack of crisis preparedness. The first messages and instructions issued by the university's top management show the degree of uncertainty of the first decisions made within the university. Not only did senior management have little understanding as to the extent of the crisis, but they also lacked the tools to ensure a unified and rapid response to the new situation. Inexperienced in dealing with a crisis of this scale and duration, the university had no formal crisis management plan. Central authorities took steps to provide some guidance early in the crisis, but lower-level authorities also took steps to protect and support 'their people', which created a significant degree of fragmentation in the immediate response to the crisis.

Shortly after the campus shutdown, the university rector held a meeting with provosts and all unities heads to outline alternatives for dealing with the new pandemic situation and the more urgent changes needed in the university's regulatory framework for approval of formal decisions. As early as March, the rector's office issued a formal resolution (Resolution GR 7945, March 28, 2020) regulating and confirming the use of videoconferencing in the decision-making process in all collegiate bodies. However, it was not until June that the university regulated the use of online resources for habilitation exams and only in August that the same resources were validated in procedures for selecting new academics (Resolution 8002, August 3, 2020).

Given the myriad challenges faced by the various units, the provost for undergraduate studies has been cautious in his decisions. While supporting and advocating the move to online teaching, he refrained from commanding the move. He gave no clear guidance on how online classes would factor into students' final grades. It was not until April 2020 that the provost released a formal ruling recognizing online classes as an alternative to traditional face-to-face instruction (CoG ruling 7949, March 27, 2020). On the other hand, as postgraduate education has a more homogeneous structure, the provost for postgraduate education has addressed the new situation by adopting a clear set of rules to support the transition of academics to online teaching (PRPg e a COVID, official communication, March 18, 2020) and guarantee the validity of online thesis defenses (Circ.CoPGr/11/2020, March 16, 2020). The provost for research also issued a communication recommending that all on-site research activities (except those related to a pandemic

situation) be suspended if possible. However, he formally regulated online activities of researchers working in laboratories and units only in July (CoPq Resolution 7966, July 24, 2020)[2].

Crisis management teams

After the initial moves coming out of the rector's office, the pattern of organizational response was largely determined by the degree of activism of each unit's leadership. Some units centralized many critical decisions at the undergraduate level, and the transition to online teaching followed a unified pattern. Some units also took initiatives to support students who faced challenges in transitioning to online teaching. Some created programs to provide laptops to students from low-income families; others even contracted with a local provider to provide basic Internet services. Other units left the responsibility for recruiting academics and deciding how the transition to online teaching would take place in the hands of each program coordinator. In some cases where the program was jointly administered by different departments, the final decision was made by each department separately or even left in the hands of an individual faculty member. In this sense, the university's response to the crisis was characterized by a considerable degree of fragmentation, particularly at the outset of the crisis.

On May 26 the rector's office appointed a special working group responsible for planning the university's response to the crisis. In June, based on the recommendations of this working group, the top administration took the decisive step of converging these initiatives by issuing a formal decree postponing the academic year and announcing that full-time teaching would not resume until 2021 (CoG 7962, June 26, 2020). Since the top administration has not officially cancelled the semester, the refusal to hold online classes and student evaluations could constitute a violation of the academic's legal duties as a public servant. In the face of the new reality, even those units that have chosen to suspend classes have resumed online teaching and have begun to plan for the material and psychological needs of faculty and students.

Effects on the academic faculty members

In the Brazilian context, the tense political environment created by the far-right who control the federal government compromised the response of public universities to the crisis (Balbachevsky & Albuquerque, 2021). For most federal universities, a lack of resources coupled with a conflicted political environment led to decisions to cancel terms and suspend all teaching activities. Although USP is not a federal university and has not been directly affected by this conflict, the university's academic union (ADUSP) has advocated for the cancellation of the semester (ADUSP, director's email, July 13, 2020). Although most academics did not support ADUSP's position, many local academic leaders expressed discomfort with the move because most academics had no experience with online teaching.

The April-May 2020 survey, Use of Digital Tools in Teaching Activities, conducted by the Métricas research group, provides some evidence of the general discomfort that most faculty face. First, most faculty have had no experience with online teaching. More than 75% of academics responded that they had less than 10 hours of online experience before the pandemic situation. For the vast majority (75.8%), the informal network of colleagues was the most important source of support and guidance when faced with the challenges of the virtual world. Although the university provided alternative training options for faculty, only 36% had attended these programs, while other 33% said they knew nothing about the university's

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[2] See Appendix 2 for links to all official USP resolutions and rules.

efforts in this area, and the remaining 31%, even being aware of the initiative, didn't use these resources. There is also some evidence in this survey of differences in the units that support academics. Systematically, academics associated with specific units gave a very positive response when asked to rate the support coming from their unit, while others associated with other units gave a very negative response (Métricas, 2020).

As the pandemic continued, university management and leaders were aware of the unfolding effects of the crisis. New directives were developed at the central office, deadlines were flexibly regulated (especially at the graduate level), and new services were created. The university adopted special programs to support students and faculty overwhelmed by parental responsibilities due to school closures and created a hotline for faculty and students facing stress and burnout. However, the fragmented model of decision-making within the university still persists. In 2021, when the university begins planning for resume face-to-face activities, although general guidelines come from central administration, the final decisions about how they will work for faculty, staff, and students is again left in the hands of each unit's leadership.

CONCLUSION

Crisis management perspectives found in the literature often overlook the uniqueness of HEIs, the role of governance, autonomy, organizational fragmentation, resources, infrastructure, and finance in the response of HEIs during a crisis. Political, organizational, and communication aspects can be critical during a crisis response. Differences in perceptions and attitudes about the significance of the crisis among different academic groups can determine the resources and actions to address it. This chapter examines these aspects when analyzing the experiences of two public universities, TAU from Finland and USP from Brazil, in their response to COVID-19. Both were described during the initial response in March 2020. Thus, the authors focused on the first months of the crisis stage.

In the Finnish case, the university-level continuity plan was the main crisis management tool required by law. The Brazilian university did not have such a plan. The Finnish continuity plan was comprehensive, including crisis organization and crisis protocol. It provided important guidelines for coordinating crisis management. Because this plan was newly developed, it increased TAU's preparedness and situational awareness. It supported the university's ability to provide a systematic and coordinated response. However, the continuity plan did not require full remote operation, as was the case with COVID-19. In this respect, the continuity plan did not define an institutional response; instead, it was the result of collaboration among other universities during the crisis.

In Brazil, the legislative framework did not require a continuity plan at the university level during emergencies. Although USP had several small teams assigned to each building to deal with crisis situations, as required by Brazilian law, the purpose of these teams was mainly to respond to local disasters such as a flood or fire. At the beginning of the COVID-19 crisis, the boundaries of authority were breached. Many scientists and students felt isolated and lost; this explains why the central administration spent so much effort addressing the need for changes in the internal regulatory framework. It was necessary to build a system of authority and assert responsibility, as well as to guarantee that scholars and students would not be left without legal guidance and technical support. In the Finnish case, this was not possible.

The first reactions of the university management to the crisis are very important. In the Finnish university, the top management immediately took the crisis seriously. TAU planned and implemented its response within the university, relying on a structured and hierarchical model and a formal line management organization. The university consulted with government agencies and local hospitals, given the seriousness

of the crisis and the lack of knowledge about COVID-19. In the Brazilian case, the first initiatives were aimed at developing a new framework within which decisions could be made and approved. The university also created two ad hoc crisis committees, one composed of academic health leaders and responsible for advising the rectorate on the epidemic situation. The other, a crisis management committee, responded to regulatory and executive decisions.

Whereas in the Brazilian case, USP needed to start creating a regulatory framework to respond to this type of crisis, in the Finnish case, it was all about a continuity plan. In Finland, continuity plans depend on the individual university, and there are not the same crisis response models among Finnish universities. TAU established its crisis management teams, and their regular crisis meetings began as required by the continuity plan.

Both universities faced a similar crisis that led to the need to close their campuses and abruptly suspend all campus activities. They followed state mandates to close campuses. Both universities had similar goals in responding to the crisis: first, to monitor and control the epidemic situation and, second, to ensure continuity of the most important activities, especially teaching and research. In addition, both universities, being research-oriented, mobilized their research competencies to contribute to the health crisis facing their societies.

One significant difference between the two COVID-19 response cases is the organizational level of crisis management responsible for crisis phase actions. In the Finnish case, the institutional level concentrated all crisis phase decisions and initiatives related to crisis planning and response. In the Brazilian case, although the top administration issued the main guidelines and the vice chancellors provided the basic regulatory framework, each unit of the university (schools, faculties, and institutes) was responsible for the actual planning and implementation of the crisis response.

At USP, the actual response design decisions remained in the hands of the units, whereas at TAU, the role of the units was to implement the crisis stage decisions made at the university level. This distinct difference made the Finnish universities' responses more uniform and comprehensive, while at USP there was a large difference in responses depending on the degree of actual coordination that each unit played and its involvement in guiding and supporting academics in dealing with crisis-induced problems. The internal effective coordination of crisis management operations was very important. Without creating a crisis management team and defining its responsibilities, it would not have been possible to handle a crisis in a real situation (e.g., Zdziarski et al., 2007).

Dissemination of information to staff and students was a major factor in the crisis response, and the authors emphasized its criticality present in both cases reviewed here. In all of its information and communication activities, the Finnish university followed, and if necessary, consulted with government agencies to obtain the most accurate information. Within TAU there is a specific intranet platform of which key administrators and managers are members and to which they have access. The Brazilian university has also developed a web portal to publicize key crisis initiatives and information about the epidemic situation in São Paulo.

From an external perspective, both universities paid attention to external stakeholders. TAU maintained contact with the media, partners, various external stakeholders, and kept the general public informed. It also appointed a security expert to maintain constant contact with key external stakeholders. USP also followed the same direction, maintaining ongoing contact with the media, partners and state government, emphasizing the university's presence and importance in responding to the crisis and emphasizing academic continuity.

At both universities, the conditions for resuming teaching amid the devastating experience of campus closures was a major theme in communications coming from crisis management. In both cases, COVID crisis management teams were established, but with different functions. The TAU team made immediate decisions and was responsible for planning actions related to teaching, facilities, IT services, and priorities. The USP team was primarily responsible for advising the rector's office on health care issues.

As the crisis progressed, however, priorities in crisis management shifted. At TAU, the focus was on implementing a continuity plan, as well as communication and crisis response management. At USP, the focus was on three aspects: first, the need to reform the university's regulatory framework to create an environment that could provide academics with sufficient assurance and guidance, supporting their decisions about teaching and advising. Second, to address the need to give academics the tools and expert guidance to resume teaching remotely and to help low-income students with insufficient access to the Internet. Third, there was the issue of managing the external image of the university. The Brazilian university researchers were at the forefront of Brazil's scientific and medical efforts to respond to the crisis. The rectorate and several units within USP took an active role in supporting research groups that decided to change the focus of their research to respond to the public health crisis. The top administration coordinated these efforts, opened a public fund to collect public contributions to support these new research projects, and established a dialogue with the São Paulo State Science Foundation.

Academic employees obeyed the requirements set by the university in Finland and solved crisis situations consciously. However, remote work caused loneliness and the need to manage IT systems and problems independently from home (Mäkikangas et al. 2021; Mäkiniemi, Oksanen and Mäkikangas, 2021). Mid-level supervisors and managers have played an invisible role, and remote leadership requires improvement.

Although this chapter focused only on the pre-crisis and crisis response stages, it can be concluded that crisis management activities were placed differently in the two universities, but communication was at the center of both universities. The two top priorities in the Finnish university were crisis management and internal communication. The rector of the Finnish university had considerable decision-making power to put the continuity plan into action. There was active communication with external organizations, such as the National Health Organization, and the university coordinated with other universities in crisis situations through Unifi (the national council of university rectors in Finland). The Brazilian university also coordinated with other universities in the state through the São Paulo State Council of Rectors. The role of Brazilian university academic leaders in the state governor's emergency committee also ensured a continuous flow of information between the university and external agencies.

FUTURE RESEARCH DIRECTIONS

This study is based on a case study methodology that allowed for a more in-depth examination of the institutional response to COVID-19. While the study provided valuable insights into the crisis response at two different universities, the sample is too small to be representative of how the pandemic has affected other higher education systems. This, of course, creates a need for further study of crisis responses to COVID-19 in other HEIs. Another limitation of the study has to do with the availability of materials. Because the study was initiated during the pandemic, access to empirical peer-reviewed data on the impact of COVID-19 on HEIs was limited, so much of the literature used in the study to examine the areas that most affected HEIs during the pandemic were short news stories, articles, and blogs. Another limitation of the study is that the authors were only able to study the early stage of the crisis response. Since the crisis is

still ongoing, there was no opportunity to assess the post-crisis stage. This creates a need for future research of the post-crisis stage once the pandemic is over. More lessons can be learned in the future when the crisis moves to a more normal state of security and risk management at universities in general and more research data on the various aspects of the successes and failures of crisis management become available.

Increased situational awareness and an overall picture of the situation are important components of university safety and risk management. Security risk standardization is an emerging and promising area of research (Wirth 2020, p. 138). Although the security and safety environment is different in all countries and contextual elements should be considered, universities around the world can benefit from general research on crisis management and emergency planning models.

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KEY TERMS AND DEFINITIONS

Crisis Communication: An action during a crisis response stage to inform individuals, communities and organizations about the crisis and crisis management strategies.

Crisis Management Team: A group of specialized individuals responsible for prevention and response during crisis in an organization.

Crisis Management: An approach deployed by individuals or organizations to deal with crisis which involves critical decisions within a critical time frame and with the best available information.

Continuity Plan: A testable crisis plan which allows for simulation of crisis events, specifies crisis organization and crisis preparedness and that guides potential crisis responses.

Crisis Preparedness: Measures taken by individuals, communities or organizations to prepare for, prevent or reduce the impact of crisis.

Crisis Stages: Three stages of crisis development: pre-crisis, crisis, post-crisis.

Crisis: A state of emergency that disrupts functions of individuals, communities or organizations.

APPENDIX 1
Internal sources, Tampere University

- Tampere University. Continuity plan. 19 December 2019.
- Tampere University. Coronavirus bulletin for exchange students studying in Italy. 27 February 2020.
- Tampere University. Coronavirus follow up. 27 February 2020.
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- Tampere University. Corona working group. Memorandum 23 March 2020; 30 March 2020; 6 April 2020; 15 April 2020; 20 April 2020; 27 April 2020; 5 May 2020; 8 June 2020.
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- Laurila Riikka, Head of emergency management. Phone discussion with one of the authors of this article. 10 May 2020.

APPENDIX 2

Internal sources, University of São Paulo

- All University's formal resolutions and rules can be accessed at http://paineira.usp.br/leginf/
    - Resolution GR 7945, March 28, 2020, available
      at http://www.leginf.usp.br/?resolucao=resolucao-no-7945-de-27-de-marco-de-2020-2

- Resolution 8002, dated August 3, 2020, Available at http://www.leginf.usp.br/?resolucao=resolucao-no-8002-de-03-de-agosto-de-2020
- CoG Resolution 7949, dated March 27, 2020 available at http://www.leginf.usp.br/?resolucao=resolucao-cog-no-7949-de-27-de-abril-de-2020
- PRPg e a COVID, official communication, dated March 18, 2020, available at https://www.prpg.usp.br/attachments/article/24/Circ%20CoPGr%2010%202020%20Covid%2019%20Disciplinas.pdf
- CoPq Resolution 7966, July 24, 2020 http://www.leginf.usp.br/?resolucao=resolucao-copgr-no-7966-de-24-de-junho-de-2020
- Circ. CoPGr/11/2020, dated March 16, 2020, available at https://www.prpg.usp.br/pt-br/noticias/6402-circ-copgr-11-2020-orientacao-para-defesa-e-exame-de-qualificacao
- CoG Resolution 7962, dated June 26, 2020 available at http://www.leginf.usp.br/?resolucao=resolucao-cog-no-7962-de-23-de-junho-de-2020

- Relevant messages sent through email to university's academics, employees and students at the onset of the Crisis
    - University of São Paulo. Segunda mensagem do reitor à comunidade universitária sobre o coronavírus [Second chancellor's message to the university community about the coronavirus]. Email sent by the rector to all USP's academics, students and employees. March 16, 2020.
    - University of São Paulo. Circular do reitor aos docentes da Universidade [Rector's circular to university professors]. Email sent by the rector's office to all academics. March 19, 2020.
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    - University of São Paulo. Mensagem do Pró-reitor de Pós-graduação sobre as atividades da PG [Message from the Dean of Postgraduate Studies about PG activities] email from the provost of graduate education to all academics. March 20, 2020.
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