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# Innovation in the pandemic: the actions of the Federal University of Mato Grosso do Sul to guarantee the rights of the university community

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**Abstract.** The Federal University of Mato Grosso do Sul (UFMS), in order to meet the United Nations Sustainable Development Goals and guarantee the constitutional rights to health and higher education of its university students, adopted innovative initiatives during the Covid-19 pandemic, allowing the maintenance of academic and administrative activities. With the emergency remote teaching for students and home office for servers, emergency aid for digital inclusion was made available, such as costing internet packages, mobile data chip distribution, electronic equipment loan, financing of personal protective equipment and installation of internet via radio in villages for indigenous students. Professors were offered training courses on information and communication technology tools and innovative methodologies for remote teaching. Furthermore, UFMS offered free molecular testing and diagnosis of Sars-Cov-2 to members of the academic community of Cidade Universitária who presented symptoms of Covid-19. All these actions carried out by UFMS, besides highlighting it on the national scene, made it possible to complete the 2020 academic calendar within the same year, an achievement that took place only in two other Brazilian federal universities.

### Keyword:

Innovation in the pandemic. Right to education. Right to health. Digital inclusion. Sustainable Development Goals

## 1. Introduction

The Federal University of Mato Grosso do Sul Foundation (UFMS) was one of the three Brazilian federal universities that completed the 2020 academic calendar within the same year, as it continued its academic and administrative activities remotely [1, 2].

The decisions taken by the UFMS demonstrated performance in accordance with the

recommendations of the World Health Organization (WHO), Ministry of Health, Ministry of Education (MEC) and the State Health Department of Mato Grosso do Sul, following the guidelines regarding social distancing and guaranteeing the right to higher education of its university students, as recommended by the National Council of Education-Full Council (CNE/CP), in Notice No. 11/2020, standardized by MEC through Ordinance No. 544/2020 [1, 2].

Since the beginning of the pandemic, the UFMS has disclosed, through its institutional communication channels, guidelines to the university community on preventive measures against the dissemination of the coronavirus, gathering all the information on a website created exclusively for this purpose: [www. ufms.br/coronavirus](http://www.ufms.br/coronavirus), with the Ombudsman as the official means of communication for suggestions, compliments and complaints [1, 2]. Ordinance No. 387, of March 12, 2020, constituted the Emergency Operating Committee (COE), which is an advisory committee of the Institutional Governance Committee (CGI) of UFMS [3]. The COE is formed by specialists in the various strategic areas related to health, being responsible for providing guidance on issues related to Covid-19 within the University, aiming to protect the university community from the virus. The monitoring of the pandemic by the COE is continuous, causing new strategies to be suggested and, in particular, the evaluation of health scenarios in the ten municipalities where there is a UFMS campus.

With this institutional configuration in the face of the pandemic, the on-site activities of all undergraduate and graduate courses (specialization, master's and doctorate) were replaced by remote teaching and learning methodologies and by the use of Information and Communication Technologies tools (ICT) as well as servers were allowed to work remotely in order to reduce mobility and crowding in the University buildings. Even so, UFMS maintained the 2020 Academic Calendar, through the new planning of the activities of each Sectoral Administration Unit (UAS) and the adoption of Remote Emergency Education (ERE). Facing this new scenario, the UFMS used innovative initiatives during the pandemic to guarantee the constitutional rights to health and higher education of its university students, while meeting the United Nations Sustainable Development Goals. Such initiatives will be addressed in this article as a way to spread ideas that jointly contribute to both higher education and sustainability.

## **2. Pandemic Planning**

In order for its activities to continue remotely, the UFMS planning was done quickly and efficiently, through the analysis of the entire context of the institutional reality, with the COE as the decision-making body.

Initially, Ordinance nº 414, of March 17, 2020, created the UFMS Contingency Plan, an administration and management instrument used to manage and plan actions to fight the pandemic [4]. Cross-cutting measures were taken to reduce dissemination, organized into three interdependent dimensions: 1) People Care Measures; 2) Measures of Academic Activities; and 3) Communication Measures.

UFMS also created the Academic Activities Guide during Covid-19, a document aimed at professors, administrative technicians and undergraduate and graduate students, which presents suggestions on how to deal with directed studies, extension activities and undergraduate and graduate projects and programs, undergraduate and graduate research,

during the replacement period of on-site activities as a form of protection against the coronavirus [5].

Remote work for servers (professors and technicians) was authorized and regulated by the University, and the interested party must formalize the request with the Rector of People Management, if it fits into the situations provided for in the institution's rules. In all, 279 servers requested remote work in 2021, being 202 technicians and 77 professors [2].

In a pioneering way, the University developed a Biosafety Plan, with guidelines for the university community on procedures in relation to the Covid-19 pandemic [6]. This was the first plan published among Federal Universities in the country, having become a reference for the MEC in the National Biosafety Plan. In addition to the Biosafety Plan for the entire institution, each campus, faculty and institute developed its respective plan.

The Biosafety Plan is currently in its fourth version, as it is updated as the pandemic unfolds. In March 2020, the first version of the document was published, with the adoption of measures aimed at prevention, minimization or elimination of risks inherent to the Institution's on-site administrative and academic activities, to preserve the health of servers and students. In the second version, the Proseguir system in the state of Mato Grosso do Sul, which analyzes the Covid-19 scenario in all municipalities, including where there is a UFMS campus, was adopted in the COE assessments. In the third version, the testing flow and the recommendation of the hybrid teaching-learning model were inserted, with the possibility of carrying out practical activities in person, in a rotating class system. In the fourth version, the UFMS vaccine tracker was created, which monitors the vaccination of servers and students, and the conduct protocol when testing positively in community members in face-to-face activities [6].

The University also created the program "Se Cuide, Te amo! (Take care, I love you!) An action from the heart of UFMS", aiming at monitoring and supporting the university community, in the sense of carrying out actions that can offer improvements to the quality of life of people (servers and students), especially during the confrontation with Covid-19 [7]. The plan is divided into three thematic axes: Axis 1 - Caring for people, in an inclusive environment; Axis 2 - People Development, in a sustainable environment; and Axis 3 - Technological Advancement, in an innovative environment.

### **3. Innovative Initiatives during the Pandemic**

In addition to all the planning aimed at preserving health, UFMS also provided conditions for its nearly 25,000 students and 3,400 servants to maintain their academic and administrative activities, even remotely, in addition to contributing to society in confronting Covid-19. Thus, innovative initiatives were taken by UFMS during the pandemic, aimed at preserving the physical and mental health of students and servers during social isolation and, mainly, avoiding school dropouts.

The innovative initiatives are linked to digital inclusion, training aimed at the use of technology tools used in academic activities and protecting the health of members of the university community. These initiatives that led UFMS to national prominence in Brazilian higher education in this pandemic period will be described below.

### **4. Training of professors and students**

As the transition from on-site to remote teaching was sudden, due to the urgency of

social distancing to contain the transmission of the new coronavirus, professors and students were faced with a new reality of work and studies, respectively. Therefore, UFMS was faced with the need to carry out training so that academic activities could proceed.

The Digital and Distance Education Agency (Agead) of UFMS, as early as March 2020, provided about 50 video tutorials on the use of ICT tools [1]. The instructional videos addressed the main teaching opportunities of each available platform, such as: Virtual Learning Environment (AVA) of UFMS and Moodle; Google Classroom, Google Meet, Google Drive, Google Forms and Google Jamboard; Skype and OBS Studio.

Lives were also held on Youtube, by the UFMS TV channel, aimed at professors, providing updates on digital technologies and innovative methodologies for the ERE during the pandemic. The seven topics covered were: Strategies for Remote Teaching (454 views); Google Classroom (953 views); Recording, Editing and Publishing of video classes (666 views); Activity settings in Moodle (510 views); Creation of websites and portfolios on Google Sites (179 views); Google Jamboard, Mind Maps on Coggle and MindMup (235 views); and Open Educational Resources (380 views) [1].

In 2021, UFMS made available new offers of training courses in Distance Education (EaD) and Training in ICT, with non-mandatory enrollment for all servers and technicians, in order to enhance professor training for the use of the Distance Education methodology and digital technologies for education. Thus, around 1,500 professors (and a total of 3,400 civil servants) had the opportunity to take these two courses. 224 new certificates of the Distance Education Training Course and 231 new certificates of the ICT Training Course were issued, resulting in approximately 450 different certified professors in the last three semesters [2].

## **5. Digital inclusion.**

Aiming to create and implement conditions for students to continue their studies and servers to work remotely during the pandemic, UFMS implemented innovative strategies related to digital inclusion, leveraging the resources made available and the assistance offered.

At the beginning of the ERE, UFMS opened a register so that students who did not have access to the internet and/or computers in their homes could use the University's computer labs. In April 2020, an unprecedented selection was opened for up to three thousand economically vulnerable students with difficulties in accessing the internet to receive financial assistance from R\$30.00 to R\$60.00, according to the number of subjects enrolled, to pay for the acquisition of internet data packet [1]. This initiative became a reference for the MEC, which created the "Alunos Conectados" program, distributing mobile data chips for cell phones to all students in the country's federal network. With this national program, UFMS migrated the digital financial aid for the distribution of data chips of 20Gb per month, benefiting 961 students until the month of July 2021 [2, 8, 9, 10].

In response to a demand from the UFMS Rectory, the Federal Government, through the MEC, released R\$3 million for the acquisition of Chromebooks and laptop computers to serve students in vulnerable situations. Equipment is lent to students so that they can carry out their academic activities, and must be returned at the end of the academic semester. In July 2021, 396 Chromebooks and 118 laptops had already been loaned, totaling 514 benefited students, with 248 Chromebooks and 166 laptop computers reserved for selected new ones [2, 11, 12].

Likewise, based on the "Se Cuide, Te amo!" program, Agead, the Information and

Communication Technology Agency (Agetic) and the Rectory of People Management (Progep) articulated the kit lending action of technological equipment for servers. The kits consist of a laptop or a desktop computer, a webcam, a headset and a pendrive. The notice is open to all permanent employees of the University, and those who meet the established criteria can be registered [2, 13].

## **6. Indigenous students connected**

UFMS created the pilot project “Aldeias Conectadas”, unprecedented in Brazil, implemented at the Aquidauana Campus (CPAQ), where about a third of the students are indigenous [14]. The health recommendation is for indigenous students to remain in their villages, avoiding contamination by Covid-19. However, there is difficulty in accessing the internet in these locations due to the low coverage of wireless/internet operators.

Thus, the University promoted the installation of radio transmitters (internet via radio) in 7 villages where there were more than 10 indigenous students enrolled in the CPAQ (Limão Verde, Taunay District, Lagoinha, Água Branca, Bananal, Ipegue and Colônia Nova). In each of the villages, two communication towers for radio transmitters and two Wi-Fi access points were installed, with a capacity of 20 Mbps, available 24 hours a day, every day of the week [15]. The demand for internet came from the students themselves to the direction of the CPAQ, which was passed to the Rectory to carry out the feasibility study through Agetic and the Rectory of Student Affairs (Proaes).

The project is financed with its own resources and from the MEC, with a monthly cost of R\$2,000.00 per village (R\$14,000.00 monthly with the 7 villages), totaling R\$672,000.00 during the 4 years of the contract with the company providing the service [2]. UFMS intends to expand the project to other villages that have enrolled students, seeking permanent partnerships and support from the MEC and the Mato Grosso do Sul state government.

## **7. Health protection for students and staff**

As part of the actions of "Axis 1 - Caring for people in an inclusive environment" of the program "Se Cuide, Te Amo!", situations that deserve attention were identified and actions were developed to support UFMS servers and students aged over 60 years, to public servants who have been licensed for health treatment in the last 12 months and to those indicated by the units as a Covid-19 risk group [1]. For contact with servers and students, the UFMS provided telephone lines to a team that made the necessary referrals for psychological care or social assistance. In addition, more than 700 consultations were carried out in online psychological shifts and more than 360 conversation circles and workshops [1, 2].

Also as part of the program, in December 2020, a project called LabCamp was designed and implemented for free molecular testing and diagnosis of Sars-Cov-2 by symptomatic members of the academic community of Cidade Universitária da UFMS . Scheduling of servers, students and outsourced workers was made available by filling out an online form and already accounts for more than 260 analyses [1, 2].

On an emergency basis, in the first half of 2020, assistance was instituted for the acquisition of Personal Protective Equipment (PPE) for students who have a family income of up to a minimum wage and a half and who have essential on-site activities [1]. So far, approximately 190 beneficiaries have received amounts between R\$50.00 and R\$200.00, depending on the activity, type of exposure and frequency of action [1, 2].

In addition, the UFMS, through the Foundation for Support of Research, Education and Culture (Fapec), carried out a campaign to collect donations of materials and resources for the production of glycerin alcohol by the Pharmaceutical Technology Laboratory (LTF), of the Faculty of Pharmaceutical Sciences, Food and Nutrition (Facfan). The production of more than 4,000 liters of 80% glycerin alcohol and 8,000 liters of 70% liquid alcohol was distributed to all UFMS campuses, institutes and faculties, as a preventive measure to Covid-19 adopted by the University. Part of the alcohol production was sent to institutions, companies and hospitals to help fight Covid-19. The Regional Hospital, the University Hospital, the Federal Highway Police, the Federal Police, the Ministry of Agriculture, Livestock and Supply, and the Specialized Police Station for the Repression of Crimes against Consumer Relations [16] benefited. The UFMS units also received digital infrared thermometers, complying with the prevention measures provided for in the Biosafety Plan [17].

In July 2021, UFMS created the "Vacinômetro UFMS", an online tool to monitor the vaccination coverage of the university community (professors, technicians, students and outsourced employees), being able to carry out the referral of priority groups to municipalities to accelerate the immunization [2].

## **8. Concluding Remarks**

Since the beginning of the pandemic, UFMS has continued to care for and protect the health of its students and employees, with innovative planning and initiatives, and preserving the right to higher education. The University remained alive during the entire period of the pandemic, actively working on behalf of society and its entire academic community.

Sustainability is already one of the eight institutional values foreseen in the Institutional Development Plan 2020-2024, aiming to "incorporate responsible strategies, ideas, attitudes and actions in the economic, social, environmental, cultural and institutional dimensions" [18]. Furthermore, in May 2021, sustainability was incorporated into the UFMS Statute, that is, the actions described in this article reinforce the university's commitment to sustainability in all its aspects [19].

Likewise, sustainable development is a constant pursuit by UFMS, as the institutional mission is "to develop and socialize knowledge, training qualified professionals for the transformation of society and the sustainable growth of the country", intertwining with the Objectives of United Nations Sustainable Development (SDG). The University's innovative initiatives in this pandemic period meet at least SDG 3 (Health and well-being), SDG 4 (Quality education), SDG 10 (Reduction of inequalities), SDG 16 (Peace, justice and effective institutions) and SDG 17 (Partnerships and means of implementation) [21].

The innovative actions implemented highlighted the UFMS since the beginning of the pandemic, after all, even with the difficulties imposed by social distance, the University continued to provide study conditions, preventing the evasion of students, and work for servers through the home office. The good indexes that UFMS has been obtaining do not make it stop working on the path to achieving excellence and efficiency in the application of sustainability, a challenge inside and outside the University. We are UFMS. We are sustainable.

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