

**THE CRISIS OF THE
CORONAVIRUS
PANDEMIC AND
IMPLICATIONS FOR
THE FUNCTIONING OF
HIGHER EDUCATION
IN MOZAMBIQUE:
A BIBLIOGRAPHIC
REVIEW**

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Abstract: This article aimed to understand the successful changes in institutional practices and routines in higher education in the face of the Covid-19 crisis, highlighting the challenges of the sector's functioning in the context of the pandemic in Mozambique. The scenario of rapid spread and declaration of the new coronavirus as a world pandemic by the World Health Organization made the government declare a State of Emergency in 2020, with successive extensions, and followed by the declaration of Public Calamity Situation in 2021. This imposed the adequacy and adaptation of teaching-learning activities to the new health reality. It is a work that is classified as a qualitative approach and descriptive and exploratory typology, essentially supported by a bibliographical and documentary review. The results indicate direct implications and profound changes in the teaching process and dynamics due to emergency measures and suspension of in-person classes that imposed the sudden adoption of digital technologies and platforms in higher education.

Keywords: Pandemic, Health Crisis, Changes, Learning, University education.

INTRODUCTION

At the end of the year 2019, an outbreak of coronaviruses was announced, the spread of which has evolved rapidly around the world, forcing the World Health Organization (WHO) to declare on January 30, 2020, a Public Health Emergency of International Interest. The occurrence of accelerated spread throughout the various countries of the world led to Covid-19's declaration on March 11 as a pandemic.

Coronavirus is a disease that results in a syndrome that in its most advanced state, causes severe respiratory failure in patients and has a high potential for transmission and contamination of people (FERREIRA, BRANCHI and SUGAHARA, 2020). As a

result of its rapid propagation, the beginning of the emergence of an unprecedented global health crisis was observed. This prompted WHO and various national governments to take measures and adopt different initiatives and recommendations to contain the speed of its spread at the international level as well as at the internal level of countries.

Given this situation, several international projections indicated that control measures must be applied for long periods, as the virus would remain active for a long period and not two to three months as initially expected (GUSSO et al., 2020). There are others who pointed out that a complete return to normality would depend on the immunization of the population on a large scale or the discovery of an effective treatment for the disease (NEGRI and KOELLER., 2020).

Amidst these uncertainties, the disease is producing important social, economic and political effects on all sectors of life around the world. Understanding such effects, especially in the field of higher education, is important, since the introduction of measures such as social isolation has represented, since then, the confrontation of problems that involve, above all, changes in the form and processes of teaching that are no longer mostly face-to-face, and is now carried out in a non-face-to-face manner and using digital teaching methods. The changes generated difficulties in the constitution and use of new teaching-learning processes in different countries around the world, notably, in African countries that have recently created administrative and organizational structures and many of them are still under consolidation.

Furthermore, in these countries a large part of the population faces obstacles to accessing the services they need, and students have limited access to so-called information and communication technologies (ICT), which greatly interferes with the use of new digital

technologies and platforms. teaching. This increases the difficulties and constraints for carrying out transformations and adaptations quickly in the face of the pandemic situation.

Mozambique has not been an exception in the context of facing this new global scenario of public calamity. The first case was detected on March 22, 2020, on September 18 the number of infections reached about 6,000 cases and on November 6, two months later, the number doubled, reaching 13,485 positive cases. The evolution of infections grew rapidly and on January 20, 2021 there were already 29,396 infected people, an exponential growth trend that continued until July 27, when the number of infected people reached 122,028 registered confirmed cases and little more than 1,434 deaths (MISAU, 2021).

Initially, the government decreed a State of Emergency issued by Decree No. 11/2020, of March 30, which underwent successive extensions and was followed by a declaration of Public Calamity and Red Alert, in force since February 4, 2021. reality imposed a new order in public health as well as in the practices and routines of the State and its entities. It produced significant impacts on the lives of people and public and private organizations, given the changes that both situations brought about.

Thus, as Ferreira, Branchi and Sugahara (2020, p. 20) refer, in an attempt to curb the rate of contamination and preserve the safety of universities communities and adhere to public health guidelines, the rapid incorporation of methodologies for online teaching and learning and remote work.

In higher education, the suspension of in-person classes and the closing of all public and private institutions operating in the sector are highlighted, with a view to allowing social distancing. About this measure, the understanding is that the suspension of in-person classes would allow the isolation and

social distancing of students and teachers.

Since the first State of Emergency that determined the suspension of in-person classes, higher education has been confronted with the challenge that forces the different actors of this teaching subsystem to find alternatives capable of ensuring the necessary migration from the teaching regime in the classroom to the offering classes on digital teaching platforms. The challenge has become even more complex to be faced, as the implementation of a new paradigm of offering classes in Higher Education Institutions (Universities) meant the change not only in practices and routines, but also in the form of the relationship between the different coordination/directions of courses with universities students, mainly due to the considerations (offer of classes versus payment of tuition fees).

Added to this, this new relationship has put the sector in crisis, as there was a lack of preparation on the part of actors regarding the use of so-called digital platforms as an alternative means to guarantee the continuity of the offer of classes. As Castoni, Melo, Nascimento and Ramos (2021) argue, differently from what would have happened in Western countries, where many universities migrated from the face-to-face teaching model to remote teaching a few weeks after the outbreak of the disease, in other contexts such as the national one, educational institutions showed important limitations for the transposition of classroom teaching to one based on digital media.

The spectrum of crisis in higher education in the country worsened when, in the initial months of the State of emergency and the implementation of the remote teaching and study regime, there was a sharp drop in the quality of content offered in courses, as well as in its apprenticeship. For example, professors manifested access limitations and

insufficiencies with regard to skills for the use of information technologies that conditioned the good and effective transition that would make operating on the platforms viable.

In the case of students, they are faced with the lack of a minimum structure to access education based on digital technologies and platforms, with the lack of basic equipment for this purpose and access points to the Internet signal in universities places of residence. As it can be seen, it is possible to affirm that higher education has been facing enormous constraints to guarantee the teaching and learning process of all students and at the same level when comparing the models of teaching offer in the classroom with the appropriate models. to teaching in digital media.

Given the above, this study sought to understand the successful changes in institutional practices and routines in higher education in the face of the Covid-19 crisis, highlighting the challenges of the sector's functioning in the context of the pandemic in Mozambique. The intention was to reveal how higher education has been dealing with the impositions of the pandemic crisis, exposing how the sector lives with the new adverse reality and what are the implications for its functioning.

In this work, a digression was carried out on some practices that have characterized the management of higher education at a time of facing the Covid-19 pandemic in the Mozambican reality, through which we intended to present the current panorama in the sector. Therefore, in the research undertaken, the bibliographic review of previous studies that focused on the discussion regarding the repercussions of the pandemic on higher education around the world was taken as a research path and were selected for presenting descriptions of teaching processes and practices aimed at confronting the problem and the adequacy of the courses

to the functioning using distance resources. The idea was to discuss the practices that indicate changes similar to those observed in the context of the functioning of Mozambican Universities.

The work's contribution lies in the deepening of existing knowledge on how measures against the spread of the pandemic have worked and the systematization of the main experiences in the functioning of higher education in view of the restrictions imposed in the last two years in the country. In this context, the research aims to reduce the existing gap and increase the national literature on the subject, as there are still few works that explore the perspective related to the implications of the pandemic to unravel the situation that characterizes the higher education sector in the Mozambican reality.

This article consists essentially of five parts, the first being the present introduction, which is dedicated to contextualizing the emergence and discovery of Covid-19 cases in the world in general and in Mozambique in particular. In the second part of the work, an incursion on the problem of the pandemic and its implications in higher education is carried out, and then in the third part, the materials and methods that were adopted in the development of the research are exposed. In the fourth part, the findings of the study are presented, focusing on the advantages of using digital means of teaching and the challenges imposed on educational institutions during the process of resuming in-person classes. Finally, the fifth part of the work presents the final considerations about the study.

THE PANDEMIC AND DILEMMAS OF HIGHER EDUCATION (INTERNATIONAL AND NATIONAL)

The term pandemic is of Greek origin, from the prefix "pan" and "demos" of people and used for the first time by Plato in ancient

Greece. As Resende (1998, p. 154) argues, Plato associated the term pandemic to any event capable of affecting all human beings. The meaning of the word pandemic was also used by Aristotle, and Galen related the pandemic to epidemic diseases that were widely spread across the globe.

The author also comments that in modern times, the pandemic came to be conceived as a large-scale epidemic that spreads in many regions of the world. Asian flu, for example, was one of the most talked about pandemics that caused the death of approximately 20 million people on planet earth.

And today, the world is faced with the occurrence of the Covid-19 pandemic, the name used by the WHO for the new coronavirus, whose discovery occurred in December 2019 in the city of Wuhan, Hubei province in the People's Republic of China on the Asian continent. Covid-19 is a disease caused by the virus, where "co" means corona, "vi" means virus, "d" for disease and "19" for the year the pandemic was discovered (MISAU, 2020, p. 10).

With the onset of the pandemic, education systems were severely affected, leading to changes in the way in which education services were provided, as well as the closure of universities and schools throughout the world. This situation occurred because it was estimated that the introduction of quarantine periods would make it possible to contain the spread of the disease and its continued spread with even greater consequences, above all, causing deaths to a large number of people. Some countries that did not follow the complete closure of educational establishments (Germany, Italy, United Kingdom, China and Australia) proceeded, according to Gusso et al., (2020) to changes in the academic calendar and created initiatives in which companies could offer free services (classes) to the population during the quarantine period.

The authors mention that other actions involved the permanence of some schools only for children of workers in sectors considered essential and for children in vulnerable situations. In this line of support for people, public access to the internet was expanded and courses or courses were offered online through platforms managed by educational institutions.

As a result of the decisions that announced the suspension of in-person classes in universities at the international level, several ways emerged, considered as alternatives for the continuation of the offer of the teaching process and fulfillment of the academic programs. Gusso et al., (2020, p. 4) talk about forms or tentative models of adaptation of digital teaching systems whose implementation came to evidence interesting changes in the praxis of teaching, but they also exposed several difficulties.

With regard to the problems that emerged, those related to: a) the lack of psychological support for teachers stand out; b) the low quality of teaching (resulting from the lack of planning of activities in digital media); c) the work overload attributed to teachers; d) student discontent; and e) limited (or non-existent) student access to necessary technologies.

In Mozambique, the Ministry of Health (MISAU) notified the first case of imported coronavirus on March 22, 2020, in the capital city of Maputo. The case of Covid-19 and its spread in the country led the president of the republic to announce the suspension for thirty days of all activities from pre-primary to higher education on March 23, as well as the holding of social events with the participation of more than fifty people, whose measures were enshrined in Decree No. 11/2020, of March 30, which instituted the State of Emergency (later extended by Decree No. 12/2020, of April 30).

In general, the restrictive emergency measures in view of the need to contain the spread of Covid-19 affected all sectors of the country's socioeconomic life, and in higher education they included, among others, the suspension of in-person classes and the closure of all public and private institutions Throughout the national territory. These measures were intended to prevent situations of rapid transmission and contamination by the virus in educational establishments (which are places that generally see a greater agglomeration of people).

And, due to the uncertainty regarding the possible occurrence of new contaminations by Covid-19 and the exhaustion of constitutional limits for the extension of the State of Emergency, the government of Mozambique was forced to approve Decree No. 79/2020, of 4 September, which establishes in the country, the Situation of Public Calamity and Red Alert, for an indefinite period. With the persistence of the pandemic, the situation of public calamity was first revised by Decree nº 1/2021, of January 13, and sometimes successively during the year 2021. The purpose of such revisions was to adapt and adjust the necessary restrictive measures according to the evolution and rhythm of the contaminations caused by the disease.

A survey carried out during the occurrence of an influenza epidemic in Alberta, Canada, in 2009 revealed that the suspension of classes and the closure of educational institutions reduced the contagion by about 50% and helped to overcome the crisis in that region. (Sanz; González and Capilla, 2020, p. 7). However, even aware that this is a reality far from Mozambique, the Canadian example has been used as a reference to consider that the closure of educational institutions and the suspension of in-person classes is a way to avoid multiple crowding and contagion in the precincts. schools, currently with the emergence of Covid-19.

Although the presidential decision to close and suspend classroom classes in the country had negative effects for the education sector, it is clear that it was necessary given the emerging context of the health crisis. As a result, in 2020 and 2021 the Ministry of Science, Technology and Higher Education (MCTES) in Mozambique issued several communiqués with the aim of exhorting and guiding national universities institutions to observe the Covid-19 prevention measures. The universities were responsible for replicating the care and prevention against the virus, publishing the communiqués so that the interveners could scrupulously comply with the decisions made.

Decisions in the light of the pandemic situation are based on technical assumptions and social and economic reasons, which give rise to restrictive measures considered appropriate to the context of deteriorating sanitary conditions. However, what has been observed are deficiencies in the way universities have managed emergency measures since universities decree. There are times that they have not privileged relationships and management practices of the pandemic based on more participative articulations, contrary to the privilege of taking vertical rather than horizontal decisions.

The MCTES issued an official letter on March 21, containing the main guidelines for educational institutions on how to carry out the activities provided for in the academic calendar and in compliance with the government measures adopted to deal with the worsening situation in public health. The issuance of this governmental document followed the holding of a meeting between the ministerial authorities and the representative and managing entities of the universities, it must be said, interfered in the routines and practices usually verified in the academy.

As if seeking to respond to such measures, universities embarked on the adoption of controversial initiatives for not having paid the necessary attention to follow up on the decisions taken. It was to be expected that they would immediately promote consultations with the direct stakeholders of the teaching and learning process (managers, technicians, teachers and students) with a view to defining effective ways to comply with the measures without causing damage, as has been witnessed in universities operation.

It is understood, therefore, that the existence of dialogue and joint reflection between the ministry and the universities, and between the universities and students and professors regarding the management of Covid-19 constitutes an opportunity for interested parties to share the possible solutions and necessary adjustments in the educational structure during and after the pandemic. This type of articulation would allow the universities and other actors to carry out a joint assessment and choice of alternatives on the operating scenarios of the universities and ways of managing the health crisis.

And, despite enjoying pedagogical and administrative autonomy, the universities did not take care to strengthen the dialogue and deepen the reflection among teachers and other servers, extending to students regarding aspects associated with the suspension of in-person classes, migration to the model of classes supported by digital platforms, payment of tuition fees, readjustment of the academic calendar, among others.

It is worth noting that the adaptation of universities to the teaching modality based on digital media represented a temporary change in the way in which education is offered, that is, it implied, as Silus, Fonseca and Jesus (2020) defend a new form of instruction characterized by be an alternative delivery

due to the juncture of virus propagation.

The use of digital teaching means, as these authors argue, is not to be confused with the so-called Distance Education (EAD), as the latter has, in its way of functioning, a set of practices and processes that are specific to it and supported by systems of teaching and learning different from those applied in face-to-face teaching. According to Oliveira and Chaves (2020), despite considering it important for students to interact with others, with instructional resources and with the teacher, however, interaction does not represent the main characteristic of instruction, but must be available, common and relevant.

In the same line of understanding Gusso et al., (2020) consider that although this modality also frequently uses the online environment for teaching curricular subjects, it differs from distance learning in terms of characteristics and possibilities of implications for education. The purpose of virtual education is to provide teaching resources based on remote classes, which would be taught in person and are temporarily offered to students through online platforms.

Therefore, the way in which the ministry that oversees higher education and universities faced the implementation of government decrees on the prevention of the pandemic, may have contributed to the emergence of questions and criticism related, for example, to the controversy over the payment or not of tuition fee on the part of students, while the State of Emergency was in force. This lack of timely articulation created several suspicions and public understandings that universities would be migrating to a model of online class provision, during the State of Emergency, with the objective of ensuring only the collection of universities revenues..

This contributed to the emergence of claims by students and complaints from parents

and/or guardians, in relation to the teaching model now offered. The central argument of contesting the payment of tuition fees was based on the understanding that the teaching contract between the universities and the students had been signed within the scope of the offer of classes that would be taught in face-to-face format and not using digital means, such as it began to occur soon after the enactment of restrictions. Criticism was often directed at the conditions of access (structure, means and resources) to classes in the environments of digital platforms designed by universities aimed at offering classes.

METHODOLOGICAL PROCEDURES

This work is classified as a research with a qualitative approach since the problem that was raised was guided by an interpretative investigation (GIL, 2008). An exploratory study was carried out to make the problem more familiar and explicit and descriptive, given that the central concern was associated with the description of the interfaces and illustration of the different manifestations of the object under investigation (RAUPP and BEUREN, 2012).

As for the methodology used to carry out this study, it must be noted that it was based on two aspects. The first one involved carrying out a bibliographic research, especially on previous studies on the subject. To obtain the articles that were used as a basis, a survey was carried out in the electronic databases of Scielo and Google Academic.

Through these, relevant information was collected with which it was possible to proceed with the description of international and national experiences that express the practices adopted for the functioning of the universities in the context of the pandemic. For the search of the texts, the following descriptors were informed: “State of emergency”, “remote

education”, “hybrid education”, “Covid-19”, “coronavirus”, “higher education”, and “digital teaching media”, having been considered only works written in Portuguese.

Seeking answers to the guiding question, inclusion criteria were adopted, considering articles whose access to the journal was free to the full texts, using the Portuguese language, published and indexed in 2020 and 2021. With this, 23 papers were selected, after the reading of the abstract, according to the constant theme in the objectives of this work. They were selected because they are suitable for the purpose of the study and are relevant works that provided information considered important for the development of the research.

The second aspect of the research was based on documentary research, which involved reading reports, manuals and newsletters prepared by MISAU and referring to the topic under study, specifically the National Institute of Health (INS) and the National Directorate of Public Health (DNSP). The work was also supported by the set of normative directives (government decrees) relating to the institution of the State of Emergency and the declaration of Public Calamity Situation in Mozambique.

As Ludke and André (1986) explain, document search presents itself as a powerful information gathering technique for the exploration of a problem or phenomenon, and for that reason it proved to be valuable. It allowed us to unveil new aspects about the Covid-19 theme and to mirror the experiences of higher education in view of the limitations imposed by it, in addition to the fact that it functioned as a complement to the information obtained from the bibliographic research. Another advantage of its use was that the documents evaluated allowed access to data that highlight the problem, which proved to be impractical to obtain from other sources.

For the operationalization of the analysis undertaken, the method of content analysis was used for both the texts and the researched documents. According to Bardin (2004), content analysis is applicable to this type of data sources through systematic procedures and objective description of the content of the information that is obtained, enabling the interpretation and inference of knowledge related to the conditions and meaning of same.

Thus, it aimed to find meanings within the set of information that were being selected and that helped researchers in the description of the qualitative phenomena obtained. Finally, the option for the aforementioned investigative paths is justified by the fact that they have shown themselves to be adequate for the proposed objective, as they not only enabled the collection of relevant information, but also helped in the response to the identified study problem. The results of the study are presented in the following section.

HIGHER EDUCATION AND FACING THE COVID-19 PANDEMIC

The responses that States have sought to offer to the crisis situation of the Covid-19 pandemic, despite being based on the set of guidelines and official pronouncements on the disease that come from the WHO, they tend to vary from country to country and influenced by distinct factors. Therefore, according to Santos (2020), no State can disguise its lack of capacity and predictability, in relation to the set of problems and respective consequences generated by the emergency situation that have been declared.

It is a fact that States, including Mozambique, must take measures depending on universities social and economic reality. Despite the fact that the WHO has declared Covid-19 as a global emergency, it does not mean that they adopt similar measures, as the consequences of decisions regarding the

pandemic differ depending on the individual realities of the countries.

In higher education, from April 2020 onwards, amid social pressure, restrictions and confinement imposed by the spread of the pandemic, students and parents expressed uncertainty about the continuity of learning. As pointed out by Oliveira and Chaves (2020), many teachers also present different allegations regarding the effectiveness of the education system in the current context. Such concerns generated by the measures involving the suspension of in-person classes and migration to online classes in a confinement regime, are associated, as explained by Gusso et al., (2020) with the difficulties and limitations demonstrated by the universities in dealing with them, in order to promote during the pandemic viable and safe working and pedagogical conditions for teachers and students.

Regarding the Covid-19 scenario and its effects, several authors (FERREIRA, BRANCHI and SUGAHARA, 2020; BARBAS and MATOS, 2020; COSTA et al., 2020 CASTIONI; MELO; NASCIMENTO and RAMOS, 2021) point out that it generated serious problems in universities. This would have occurred since the universities demonstrated when they emerged that they were not prepared to implement solutions adapted to the demands of the moment, that is, they were not organized for the application and use of digital technologies. And many of them, in contexts such as countries with very low development rates such as Mozambique, several universities did not have any internal mechanism to ensure the teaching and learning process in the remote environment or platform already in use.

According to Gusso et al., (2020) there are at the international level some (in a reduced number) universities that had technological tools even before the pandemic and few

that already had hybrid teaching systems in universities face-to-face activities. Therefore, the government measures that announced the suspension of in-person activities, propitiated the beginning of a race in search of alternative solutions for the continuity of the offer of classes to students. In order not to generate even greater losses, universities needed to find ways to enforce, to a certain extent, universities academic calendars.

Following the search for these solutions, some technological tools developed for use in teaching, gained visibility and began to be used as alternative ways to replace the traditional classroom, that is, they became the main places where teachers and students carry out universities activities (BARBAS and MATOS, 2020). This implied a change in the classical forms and practices of teaching based on the classroom as a means and the teacher as a facilitator of the teaching-learning process towards the use of digital screens as the main means.

And from the need to deal with the emergency situation that had caused the closure of educational institutions, as argued by Silus, Fonseca and Jesus (2020), many constraints emerged in the teaching process all over the world. Among them, the following stand out: the harmonization of the relationship between students and professors; the excessive use of technology as a communication tool for teaching and learning without the necessary preparation of those involved; the difficulty of teachers and students with the use of ICT; the socioeconomic condition and availability of resources and equipment at the level of teachers, students, families and society.

In this regard, with regard to universities actual preparation and ability to implement the intended changes to face the sanitary situation of coronaviruses in higher education, it is important to ask questions, such as: were the universities prepared to implement ICT

in universities academic activities? Were teachers prepared to teach through digital technologies? In addition to internet access, did students have skills to learn through digital screens? Could the pedagogical teaching practices used in the face-to-face modality continue in the same way in the realization of remote teaching? This set of questions contextualizes the different transformations caused by the Covid-19 pandemic, especially in higher education, which our ongoing research seeks to discuss.

During the period of restrictions, the ministry that oversees higher education in Mozambique strove to provide a solution that was intended to be inclusive and comprehensive in its application as a digital teaching and learning platform. To this end, MCTES, after establishing negotiations with the mobile telephony operators operating in the country, managed to sign an agreement that allowed free access to the internet as a way to enable the use of the platform now created, allowing, in a way, the continuity of the compliance with the academic calendar.

This was an interesting strategy that aimed to ensure that both students and teachers in confinement could participate together in classes, during the State of Emergency regime. There is no doubt, as explained above, that online teaching is an alternative to the suspension of in-person classes. However, the fact that teachers suddenly adopted the use of digital screens, without having benefited from specialized training in digital technologies and methodologies, had important consequences for the functioning of the sector.

It must be remembered that in the national reality, during the period before the outbreak of the pandemic, in which face-to-face classes normally took place, Universities, especially public ones, already faced problems regarding the availability of technical and technological means and resources (computers, tablets and

access the internet) for classes. As mentioned by Costa et al., (2020, p. 3), the abrupt interruption of activities under the regime of in-person classes generates impacts in the short, medium and long term, especially in socioeconomically vulnerable populations that are the most affected, reflecting the accentuation of social inequalities for access to essential goods and services.

Ferreira, Branchi and Sugahara (2020) also share this understanding by stating that, with the sudden implementation of digital media in higher education, many students and professors with reduced or even no preparation increased the inequalities that mark the sector. The lack of ICT mastery by these actors operated as a decisive factor for the observed exclusion, especially at the beginning of the pandemic regarding the capacity and ability to use digital tools, contributing to the problem of inclusion versus digital educational exclusion that has long existed.

Furthermore, in Mozambique's reality there are social asymmetries, as explained by Silva, Monié and Mulhaise (2020) and at the level of the regions in which the universities are implemented (including the socioeconomic conditions of students), which interferes with universities ability to materialize the digitally based teaching model. For example, students and faculty at universities based in the country's capital and provincial capitals are at a relative advantage in terms of access to technological resources, compared to students and faculty at universities who work in other regions of the interior of the country.

In the view of Gortázar apud Sanz, González and Capilla (2020, p. 17), the situation of inequalities in access to technological resources at home will increase the differences in the learning process, with each day of restriction and social confinement, while emergency measures are in force and

restrictive to face-to-face teaching. With the above, it is understood that the functioning of universities needs to be better organized and structured to present the required and desired learning meanings in the context of the use of digital tools, which implies that it must have appropriate conditions.

According to Silus, Fonseca and Jesus (2020, p. 1-2) in the context of acting in an emergency situation, both teachers and managers at the level of higher education intended in general ways to adapt the universities, and in particular adaptation of the set of activity plans, methodologies and contents in order to accommodate new teaching practices in remote mode. As previously mentioned, this new posture imposed on educational institutions, in addition to revealing challenges in the restructuring of universities practices, promotes the need for investment in the preparation of universities faculty, aspects that are crucial to ensure the effectiveness, the quality of the action. and social productions that involve the teaching process in question.

Following this understanding, in the Mozambican reality, it can be asserted that the use of digital platforms proves to be ideal and necessary. However, it is important to emphasize that teaching through digital technologies and platforms does not guarantee inclusion, equity or equality in learning. For example, there is no way to conduct classes with a practical and laboratory component via digital platforms. Courses such as those in the area of engineering, health and others, which require clinical skills or physical laboratories and not simulated for practical or experimental classes, which already had limitations in terms of equipment and supplies even before the pandemic period, saw the conditions of its functioning worsen.

In this context, it is clear that unable to continue with the activities provided for in universities academic programs through

the adoption of digital media, such courses were somehow excluded by the introduction of new digital solutions in the context of the health crisis. As stated by Costa et al., (2020) it is in the practical field that students develop universities specialized skills essential for universities learning and with quality. The digital platforms now adopted represent an alternative modality to teaching in times of occurrence of the pandemic, however without an insertion in the practical scenario, not allowing the experience of the future professional in this educational environment, they thus constitute gaps in the training process in teaching higher.

Briefly, in relation to the use of digital platforms in students' learning about the coronavirus, UNESCO (2020) highlights three measures on which educational institutions must reflect and adopt, without neglecting, however, universities reality, conditions and context. They are: teaching using online classes; choosing the best technologies for the educational institution according to the communication system in its area and the technological capacity of its professors and students. According to the organization, in online teaching/learning it is imperative to ensure that programs are inclusive of all students.

THE ADVANTAGES OF TEACHING USING DIGITAL MEDIA

Digital-based education has brought to light several deficiencies that higher education systems in different countries around the world have. Particularly, in the process of implementing the adopted digital solutions, problems such as the preparation of higher education stakeholders (professors, students and university managers), the weak digital culture in the courses offered, the reduced or non-existent structure for the operation of these tools are pointed out as the main aspects that must be considered.

Furthermore, it is worth noting that in the vast majority of cases in which universities guided the application of digital media in universities teaching activities, following the expansion of the pandemic health crisis, this did not occur through the necessary didactic transposition to those technologies. Therefore, it was used in a purely instrumental way, in fact, as has been pointed out many times as a justification for not severely affecting the offer of the service.

Despite this, and the problems arising from the emergence of the Covid-19 pandemic, there are advantages to the use of ICT in the teaching and learning process based on digital media. As advantages, it is highlighted that they make it possible to reformulate pedagogical practices, maximize technological tools in favor of teaching, build programs, networks and media that allow the integration of students with teachers in learning networks in virtual learning environments. This way, inserted in the context of universities, digital media allow for continuity of actions in higher education, in the reality of social isolation.

In addition to enabling virtual teaching through immersion of students and teachers in the e-learning modality (electronic teaching supported by digital technologies), ICT also introduce its participants (users) to the so-called digital learning. Digital learning is understood according to Barbas and Matos (2020) as the set of knowledge and skills necessary to work with electronic devices, including the understanding of some commands, such as: saving and sending a document via the network, in addition to the understanding of some computer and mobile device interfaces.

In this perspective, Santos Júnior and Monteiro (2020) present the advantage of virtual education as the possibility of holding classes through video classes, videoconferences and lives, with synchronous

tool applications, such as: Skype, WhatsApp, Google Meet, Zoom, Instagram, between others. In addition, it allows flexibility in the places where teaching takes place, therefore, the replacement of classrooms by an asynchronous tool, that is, learning platforms such as: Moodle, Microsoft Teams and Google Classroom.

The use of digital media associated with this set of programs tends to generate important gains in higher education. One of the positive and significant points of advantage pointed out by Oliveira and Chaves (2020) is associated with the fact that, at a time when society finds itself unable to travel due to the pandemic, they save time. Especially, they allow students and professors to have the possibility of creating new forms of relationship considered more dynamic, increasing the chances of greater exchange of information and academic experiences.

Digital media favor individual and group work, collaborative teaching as explained by Uacane and Pego (2021), promoting the inclusion and participation of more people in debates and forums, among other ways to make learning more meaningful. According to this understanding, synchronous and asynchronous digital solutions operate as learning platforms in which teachers and students experience the pedagogical work in a different way that allows transcending the space-time limits of the conventional classroom.

Another important aspect to be mentioned regarding the advantages of using digital media in higher education is the possibility of carrying out the practice of so-called hybrid education. The latter is the methodology that combines online learning practices with offline forms, in models that combine times when the student studies alone, virtually, and in parallel in the respective educational institutions, where learning takes place in

person, valuing the traditional interaction that takes place between student and teacher.

In this new modality, teachers can work on three different methodological strategies: hybrid teaching, the inverted classroom and gamification practices, since these approaches organize learning levels promoting students' autonomy and universities interaction with teachers. Such practices have potential successes, especially when remote learning is adopted, since as students were not yet adapted to online learning, these methodological practices tend to be highly engaging.

ICT-based teaching enables learning to be student-centred and not teacher-centred. According to Oliveira and Chaves (2020), they allow for a new teaching concept in which the student's experience in the learning process is valued, making them more active and a main and independent actor, at the time that is most appropriate. This way, the responsibility for learning on the part of students increases, and the use of methods that focus on them, thus incorporating the interactivity that tends to demonstrate to be more successful in this endeavor.

Finally, it can be said in a nutshell that the new pedagogical work routines involved in the digital teaching modality can very well unite the daily reality of classroom teaching with the addition of online teaching that can be developed through specialized platforms. In essence, the use of technologies in higher education expands the choice of strategies that can be used by universities, increasing the chances of opening up new possibilities for enriching knowledge.

THE SCENARIO AND CHALLENGE OF RESUMING CLASS CLASSES

In higher education in Mozambique, after the spread of the disease caused by the coronavirus, and the decision to close it in April 2020 due to the emergency situation

decreed by the central government, classes resumed in universities, especially public ones in person, first at the beginning of February of the year 2021, considering the conclusion of the second semester/period (corresponding to the academic year of 2020).

In late June, the first semester/period of the 2021 academic year began (expected to last only twelve to fourteen weeks, contrary to the usual sixteen weeks that have been provided for in the normal academic calendar, without Covid-19). However, despite significant reductions in the number of daily infections observed at the peak of the period comprising the first two waves of infections (occurring in September 2020 and January 2021), the pandemic persists and the number of infections increased again to from the end of June.

The trend is that the country's capital (Maputo) with the highest number of cases and all ten provinces of the country register significant increases in cases with the arrival of the third wave, while the immunization process is not completed. As of July 25, 2021, only 3% of the eligible population (out of a total of 28 million inhabitants) had taken the first and second doses of the immunization agents available in the country. The forecast presented by the Ministry of Health (MISAU) is that by the month of September 20% of the country's population will be vaccinated. The government also plans to provide eleven million immunizations by the end of this year.

Given this scenario, and with the rate of contamination occurring quickly, the slogans issued daily by the MISAU emphasize the widely known basic indications about the importance of social confinement, social distancing, use of masks in public places, frequent hand washing with soap and water and quarantine.

As can be understood, the return to face-to-face classes in higher education has proved to

be challenging, given the uncertainty caused not only by the emergence of new variants of the virus that causes the disease, but also because it is not about acting in a normal period without the existence of the pandemic. And, in the process of resuming face-to-face classes, the observance of health and hygiene protocols has been a major concern, regarding the safety of students, teachers, non-teaching staff and universities managers.

In particular, commenting on the face-to-face resumption of teaching at universities, Costa et al., (2020) state that there is a dilemma when considering this possibility, as students present themselves as potential transmitters of the pandemic virus and are highly vulnerable to contamination. In this perspective, it is argued the importance of examining the risks related to the reopening of educational institutions, although there is still no more accurate data at world level that show the existence of infections associated with universities.

In turn, Gusso et al., (2020, p. 3) alluding to the challenges of resuming classes in higher education explain that at the level of universities, academic departments and university courses it will be necessary to adapt universities ways of being and practices of university management. The aforementioned institutional and organizational repositioning is justified as a way to reduce pedagogical damage and risks to public health, ensuring the maintenance of higher education with the required quality, and without neglecting safety measures.

The authors also assert that it is up to the deliberative instances of the universities to present fundamental decisions that will subsidize the decisions of professors regarding the way to conduct universities subjects and other activities. This process will imply the carrying out of adjustments to be made in institutional development plans, in

the pedagogical projects of courses and in departmental management, in order to deal with the sanitary emergency situation caused by Covid-19.

It is understood that the posture that involves social distancing and the practice of hygiene care from the academic community are major challenges: the use of masks by everyone (students, non-teaching staff, teachers and managers) during universities stay in the academic environment ; the availability of gel alcohol in classrooms and in all strategic locations within the institutional premises; effective cleaning of all touched surfaces and public spaces in the academic environment. Therefore, the challenges are greater and complex to prevent universities from being the source of contamination or propagation of Covid-19.

There is, therefore, a need for cultural change in universities, contemplating new forms of involvement with the pedagogical activity. It is necessary, according to Oliveira and Chaves (2020) that they overcome barriers that have long been known and related to organizational culture in order to deal with: organizational resistance to change; lack of strategic planning for distance learning; slow pace of implementation; and finally, the difficulty in keeping up with technological changes.

Allied to these aspects, the authors cite the need to overcome, at the level of institutions, the reluctance to be involved in teaching based on digital media, resulting from the lack of teacher training, as well as the resolution of technical problems that arise. As you can see, this context requires teachers to be more dynamic and updated so that they can maintain interest in universities classes.

Furthermore, well beyond teacher training, it is important to think about the attitude of students towards the use of ICT, educational changes, even before the

pandemic, announced the need for a new look at the learning process supported by these resources.. The ways in which universities promote teaching are embedded in the new actions of the contemporary reality that society has, as well as the profile of new students, who have become producers of information and knowledge and want to constantly participate and share everything they are experiencing. And, in the massive use of digital teaching means, according to Oliveira and Chaves (2020, p. 52), it is crucial that the student is seen as the main one among the systems that are created and the knowledge itself. It is equivalent to affirming that the student needs to be seen as the key element that conditions the design and implementation of online teaching experiences, because this is the only way in which universities will be able to offer more comprehensive teaching practices that involve everyone (especially if it is the question of the urban or rural location of the students).

In short, this set of challenges requires that universities have better organization and planning systems to face the return to classroom classes. For universities to ensure a process of resuming universities academic activities in a safer way, it is necessary that they are well informed about the disease, its short, medium and long-term consequences, and how best to fight it. It also requires that they manage to deal with the scarcity of financial and material resources, on which the government must pay greater attention and offer budget support, especially to public universities.

THE GUIDE OF CONCLUSION

The present work aimed to understand the successful changes in institutional practices and routines in higher education in the face of the Covid-19 crisis, highlighting the challenges of the sector's functioning in the

context of the pandemic in Mozambique. Coronavirus disease generates harmful results for the industry worldwide. And in the national reality of Mozambique, since March 22, 2020, (date on which the first case of coronavirus was diagnosed), until the end of July 2021, just over 122,028 confirmed cases of virus contamination were recorded throughout the national territory, causing the death of about 1,434 people among the elderly, young people and even children.

This health situation generates uncertainty, worrying society, especially the academy (teaching establishments have been recurrently closed and reopened). As noted, in higher education, after the spread of the disease, classes resumed in public universities in person, first in February for the conclusion of the second semester/period (corresponding to the academic year of 2020). In July, the first semester/period of the 2021 academic year began (with an expected duration of only twelve to fourteen weeks, contrary to the usual sixteen weeks foreseen in the normal academic calendar, without Covid-19).

Despite the recent wave of mass use of digital platforms in higher education configures in a way an innovation in academic activities compared to Covid-19, it demands a lot from teachers. As evidenced, the meaning of teaching has profoundly changed since the beginning of 2020. It has become a task in which one must seek continuous improvement in the practices currently in vogue. The teacher needs to improve the entire process of planning and implementing teaching for students, which implies the search for new methodologies, especially those that encourage learning in the context of the health crisis at Covid-19.

Acting this way, the use of ICT will allow the capitalization of student-centered teaching, a humanized approach to students, in the search to influence and motivate them

to learn, the reformulation of assessments; and finally, the permanent commitment to continuing teacher education. Therefore, it is understood that teacher training is important for them to acquire didactic skills in relation to ICT, which must be linked to the teacher's attitude with regard to: pedagogical and disciplinary methods; the forms of: communication, investigation and evaluation; and the techniques and technologies.

It can be concluded after the descriptions made that the different digital tools and media applicable to higher education, that there is a fundamental purpose related to the offer of a teaching-learning experience through them, which is both valuable for the beneficiary students. online classes and the teacher who acts as a facilitator. It is worth pointing out that these learning experiences would not be possible were it not for the use of technologies and platforms in university education.

So, in the face of the coronavirus pandemic crisis, there are lessons to be learned. First, the Covid-19 pandemic must serve to learn about the need to change the way of being and being of universities, abandoning the traditionalist paradigm aimed exclusively at offering in-person classes. It is urgently necessary for them to take on, urgently and with due responsibility, online education (using digital platforms), as an effective-complementary model (adopted in the day-to-day in the teaching and learning process) and not just an emergency alternative typical of the pandemic era.

From now on, it means that universities and with the support of government structures, must prioritize in universities action plans and budgets the investment in infrastructure and technological resources better adapted to the requirements of higher education today. Second, that no educational public policy must be implemented without an effective involvement and consultation of the main

actors. This is essential to understand and understand the feeling of direct stakeholders in the teaching-learning process, especially students and teaching staff of universities, have about the subject that is the object of the policy.

Finally, considering that the pandemic remains an uncertainty with significant impacts on different sectors, universities are challenged to survive by effectively dealing with the effects of the health crisis. Especially, they must recognize that new phenomena caused by the digital solutions that have been adopted, in many cases aggravate the social inequalities that characterize the country and generate difficulties among student users. Paying due attention to these obstacles is an important organizational imperative, under the penalty of exacerbating known problems and with direct implications for the quality of teaching and academic and technical preparation of students.

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