Implications of remote education in angolan higher education in the context of the COVID 19 pandemic: Analysis of the experience of the higher polytechnic institutes of Benguela

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ABSTRACT

This research paper addresses aspects relating to the implications of the teaching and learning model adopted and applied during the Covid-19 period for teaching activity in Higher Education: analysis of the experiences of ISPB and ISPM. The same aims to analyze the implications of the teaching and learning model applied during the pandemic, and the consequences that resulted from it. To achieve the recommended objective, the bibliographic research method was adopted, under the auspices of the quantitative approach. The questionnaire was used as a data collection instrument. The study brings to light the results that show that students expressed a greater level of dissatisfaction with the application of remote education during the pandemic period. Furthermore, the online solutions applied during this period were not significantly productive. A good number of them did not participate in online classes due to lack of financial resources, digital resources and lack of motivation. Furthermore, It is clear that, in general, the level of interaction and collaboration in all resorts was a little weak. However, despite all the constraints, the study reveals that some of those who participated in online study, that is, in remote education, were able to develop some collaborative skills, and that online classes contributed to the improvement of meaningful learning.

Keywords: Distance education, Remote education, College education, COVID-19, Angola.

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INTRODUCTION

The Covid-19 pandemic was not only a global public health problem, nor a social crisis that ended up disrupting the daily lives of individuals, due to the administrative measures that resulted in restrictions on movements Sacata & Inglês (2023), but also affected several spheres: political, economic and educational. The latter (education), which is the focus of this study, has in fact undergone profound transformations from the educational system to the classroom – in the teacher-student interaction.

Thus, this article deals with the implications of remote education, applied during the Covid - 19 pandemic, in the teaching and learning process in the context of Higher Education, based on the experiences that took place at the Higher Polytechnic Institute of Benguela and the Higher Polytechnic Institute of Maravilha.

The higher education subsystem in Angola, at least until 2020, had not substantially and formally adopted the distance learning model, much less remote teaching as an alternative substrate for the teaching and learning process. However, when faced with the emergency environment caused by the Covid-19 pandemic, institutions in this subsystem and beyond have adopted different educational measures to keep the teaching and learning process active. Once adopted and applied, it is questioned whether the student community has adapted with satisfaction to this model, and above all whether its application has in fact ensured efficiency and quality in the teaching and learning process. It is in this sense that this scientific article aimed to analyze the implications of remote education, applied during the Covid 19 pandemic, in the teaching and learning process.

The research was conducted using a quantitative methodology, focusing on content analysis. For this purpose, the questionnaire survey was used as a technique to collect information from students from two higher education institutions in Benguela. The text is presented in two sections: the theoretical framework in which the state of the art around the phenomenon is privileged, and the second section, in which the results are presented, discussed and the final considerations are presented. However, the results of this research suggest the prevention and taking of psychopedagogically safe measures in emergency situations, from a technical, emotional or methodological point of view. These measures can eventually prevent pedagogically harmful situations, in addition to ensuring a more efficient and productive follow-up in the teaching and learning process.

THEORETICAL FRAMEWORK

COVID-19 PANDEMIC AND ITS CONSEQUENCES IN ANGOLA

On March 11, 2020, the World Health Organization declares covid-19 a pandemic. The decision was announced by the head of the agency, Tedros Ghebreyesus, in Geneva (UN News, 2020).

The confirmation of the covid-19 pandemic in Angola occurred on March 21, 2020, after two Angolan individuals who came from Portugal were diagnosed with the virus. All of the country's coronavirus cases were concentrated in Luanda province at that time, although the government has set up centers for institutional quarantine in all provinces of the country. On March 23, some cases of coronavirus were confirmed in Angola. Based on this, the government announced a series of measures to contain the spread of the virus, including the suspension of all flights for a period of 15 days, the closure of all borders in the country, and the suspension of classes in schools and universities across the country (Agência Lusa, CVT, 2020).

As the pandemic spread throughout the country, causing more cases and consequent deaths among the population, new measures were taken by the Angolan government. It is in this sense that "as a necessary and urgent measure to control the spread of the pandemic caused by the COVID-19 virus in Angola, a state of emergency was declared, through Presidential Decree No. 81/20, of March 25, which was extended for a period of 15 days, through Presidential Decree No. 97/20, of April 9" (Silva & Júnior, 2020). Among the measures, the following stand out: 1. The suspension of rights, such as: a) inviolability of the home; (b) the right to property; (c) the right to free economic initiative; 2. Limitations on freedom of movement, such as: (a) the purchase of essential goods and services; (b) the provision of services authorised to operate; 3. Sanitary fence in the Province of Luanda, such as, for example: the provincial sanitary fence in the Province of Luanda, with entry and exit from the territory of the Province of Luanda being prohibited. 4. Educational establishments and vocational training centres, such as, for example: closure of public and private educational establishments, at all levels of the national education system. 5. Trade in goods and services in general, such as, for example: closure of restaurants and the like, except for external service, namely takeaway and home deliveries. 6. Markets and street vending, such as, for example: prohibition of informal street markets that involve the concentration of people and closure of bars and the like, except for the provision of home delivery services.

This is a set of measures, which on the one hand were useful to mitigate the level of contagion by Covid 19, on the other hand they further aggravated life, which in general is already very difficult for the Angolan populations. Although these measures were unbridled with the declaration of a Situation of Public Calamity (Diário da República, 2020), even so, many activities projected by the public sectors became unfeasible. As a consequence, the level of insecurity in social relationships

increased and the situation itself affected people's emotional state. The uncertainties generated by the current state contributed to people's lack of motivation to actively participate in work activities, and motivated certain entities, such as private higher education institutions, to suspend the employment relationship with their staff. Therefore, the Covid-19 pandemic has triggered tragic situations that have profoundly affected the stability of education as a social sector. Thus, the teaching and learning process itself was, for a long period, discontinued, having assumed, during a phase, a form of teaching that dared to be called Distance Education, when, in fact, it was a remote educational activity.

REMOTE EDUCATION IN RELATION TO DISTANCE EDUCATION

In order to clarify and understand the topic in question, we present in this first section some concepts related to remote education in relation to Distance Education. Therefore, it is relevant to highlight the nature of each one and how applied in the teaching and learning process.

The authors present different concepts in relation to Distance Education, but, despite the differences, there are similar characteristics that can help us understand the model as a whole.

Keegan (1991) defines Distance Education (DE) as

> the physical separation between teacher and student, which distinguishes it from face-to-face teaching, two-way communication, where the student benefits from dialogue and the possibility of two-way initiatives with the possibility of occasional meetings for didactic purposes and socialization.

The author emphasizes the idea that, in Distance Education, the teacher and the student do not share the same physical space. However, the teaching and learning process occurs in situations of occasional encounters, where there is the possibility of communication between members, allowing the exchange of knowledge and didactic experiences.

Maia and Matar (2007, p.), in turn, state that distance education is "a modality of education in which teachers and students are separated, planned by institutions, which uses various communication technologies."

In addition to the fact that Distance Education is characterized by the separation between teacher and students, it is planned and legislated by the higher grades. Moreover, it is guided by the various information and communication technologies. It is in this context that the idea that

> [...] Distance education is a complex teaching modality, which has its own legislation. It has several qualified teams, from the administrative part to the production of didactic material and the mediation of the teacher, mediated by the use of technology. This modality has a strong concern with the training of teachers who will work at a distance; the production of educational content is carried out by a multidisciplinary team and the target audience is composed of adults (JOYCE; MOREIRA; ROCHA, 2020, p. 23).

Melo and Oliveira (2019) reinforce the same idea when they state that Distance Education is a modality of education fixed through the intense use of information and communication technologies, where teachers and students do not share the same physical space, but constantly share information.

Chaves (1999), in turn, states that distance education, in the fundamental sense of the expression, is the teaching that occurs when the teacher and the learner are separated (in time or space). In the sense that the expression currently assumes, it is more emphasized the distance in space and it is proposed that it be circumvented by the use of telecommunication technologies and the transmission of data, voice and images (including dynamics, i.e., television or video).

Given the understanding of the concepts of distance education and its nature, it is possible to note that Distance Education requires the taking of sustainable measures that ensure consistency in the establishment of the modality without many problems. To this end, it is necessary to keep in mind the improvement of infrastructures with technological means, that is, to have a robust information system, that is, to create platforms that are used to mediate teaching-learning. In the same way, it is relevant to consider the professional development of teachers in Information Technology, which will allow them to use technologies in a pedagogical and productive way, without neglecting the possibility of developing in students the ability to build knowledge and the rational use of technologies. In this way, it will be possible to create a distance education modality that can guarantee fundamental characteristics, such as "flexibility, economy, convenience and innovation" (Gomes, 2020).

The characteristics presented in relation to distance education differ from remote teaching, as the latter presents itself as an alternative to continue studies in the midst of the pandemic. "The term remote refers only to the change of the physical space that was once face-to-face and now, temporarily, is remote (digital), a term widely used in the area of Information Technology (IT) to refer to non-face-to-face" (Joy et al, 2020, p.13).

It is understood that the nomenclature "remote teaching" is due to the fact that teachers and students are prevented from attending schools to comply with the social isolation requirements recommended by the Ministry of Health (Tomazinho, 2020).

The idea is that the teacher and students of a class have interactions at the same times that the classes of the discipline would take place in the face-to-face model. Roughly speaking, this means maintaining the classroom routine in a virtual environment accessed by each of them from different locations (Sae Digital, 2020).

It is clear that the purpose of remote teaching is not to create an educational system, but to make classes similar to those that would be taught in person, using digital resources. The lines of action of "remote education" follow those of face-to-face education, which focuses on the traditional expository model, and has the student as a mere repository of information (Joy et al., 2020).

Therefore, Remote Teaching differs from the Distance Learning modality, as Distance Education has resources and a multidisciplinary team prepared to offer content and pedagogical activities, using different digital media; while Remote Education practices were adopted temporarily, due to the changes that occurred in the scenario of the health crisis that affected several countries around the world (Rondini; Peter; Duarte, 2020).

Follow the chart for more information and to understand the difference between distance learning and remote learning.

Remote Classroom	**Distance learning**
Live and remote classes simulating face-to-face meetings	Recorded Lectures
Teacher of the subject available daily	Tutor/Monitor as support in a timeless way
More personalized content and teaching material adjusted by the teacher according to the need	More standardized content and courseware, usually made available in advance
More flexible schedule adjusted to the current context	Standardized schedule
More Lesson-Centric Assessments	Standardized assessments
More synchronous activities	Synchronous and asynchronous activities
Workload concentrated in classes	Workload distributed among various media resources
More teacher-centric	More self-instructional

Fonte: (Ipog, 2020)

One can glimpse, from now on, the complexity of the model and the challenges that students and teachers faced during this period.

A model such as this, adopted in emergency circumstances, without the prior preparation of teachers in ICT and much less of students, whether from an emotional or Technical-Pedagogical point of view, would, in fact, provide many implications in the context of teaching and learning.

Remote education and its implications in times of COVID-19

It is important for educators to understand that remote teaching requires the planning of curricular units from face-to-face education to the remote format (OLIVEIRA et al., 2020, p.12).

This situation of resuming something that was planned for the face-to-face teaching environment and transferring it to the remote environment, without consistent and adequate preparation, can cause, to a certain extent, a debacle in the execution of the teaching and learning process.

Hasty decision-making for the implementation of a model does indeed have some psychological, methodological and even technological implications.

The academic community, that is, teachers and students, when encouraged to adhere to the remote model, in an environment of uncertainties and insecurities about the future, and without some psychological preparation that motivates them to leave to support another environment or teaching model, naturally this generates emotional discomfort and consequently lowers the emotional state. Now, if motivation is understood, according to Huertas (2001), as a psychological process, that is, it is provided through affective and emotional components. It was supposed to be expected that before decisions were made to apply the model, there would be an awareness among the students. This is a relevant process because a motivated person has an active and committed behavior in the learning process, thus ensuring better learning (Lourenço & Paiva, 2010). It is important to point out that people set goals in their lives, professional careers or travels, and it is these goals that motivate them to pursue their purposes, because, Huertas (2001) points out, that motivation is the psychic energy of the human being.

From the methodological perspective, the adoption of these measures led teachers to assume a somewhat empirical role in pedagogical terms. It should be noted that, in order to keep the teaching and learning process running during the isolation phase, some teachers have adopted virtual teaching methods, such as Facebook, WhatsApp and the telephone, as interaction tools. However, these tools served as mere means of communication, and not as instruments for the development of learning, as would be expected from a planned model. It is to be expected that this will occur, as there is no success in student learning if the teacher, as manager of the pedagogical process, is not equipped with the knowledge and strategies appropriate to the time and context in which he or she works (Kataya, 2019) The pedagogical preparation of teachers, in the context of the use of ICT, therefore matters when the moment demands.

With regard to technology, higher education institutions still have a low use of technological resources. The institutions do not have a computer network that meets the needs of an academic population that needs the use of technological resources.

Digital inclusion in Angola is still a mirage, despite the country's share of the price in Africa. The prices of internet access in Angola are not affordable. Currently, in the mobile network, the cost of 100 megabytes (MB) is about 1.60 US dollars (the equivalent of about 0.016 dollars per megabyte) (Carlos, 2018).

Paulo Araújo (Co-Founder of Startup Wi-Connect), quoted by Massala (2019) points out that, "access to the Internet in Angola, as in the rest of Africa, is very low, as only 27% of the African population has access to this communication tool and Angola is no exception. Although the country has several telecom operators that provide Internet services, a recent study indicates that the average cost of 1 GB of Internet in Angola is 7.95 USD.

As can be seen, the technological conditions in the country are so incipient that they do not allow, significantly, the implementation of a remote teaching with a high level of productivity and, much less, an effective Distance Education. It is not possible to create, at the level of higher education institutions, a model, whether remote or remote, in which all the required technical and pedagogical requirements are not met. The decision to implement a remote or remote model should be based on the psychological preparation of the academic community, the technical-pedagogical preparation of teachers and the adequacy of infrastructures with technical means appropriate to the context. Still, it is important to consider the reduction of internet costs to allow access for all students, or, at least, the adoption of measures that help in this goal.

HIGHER EDUCATION IN ANGOLA DURING COVID-19

The evolution of the Covid-19 pandemic has caused profound changes in the Higher Education system and beyond. The Ministry of Higher Education, Science, Technology and Innovation (MESCTI) is obliged to publish Executive Decree No. 02/20, of March 19, which suspends all classes in all public and private higher education institutions as of March 24, for a period of fifteen (15) days, which may be extended for an equal period if there was no decision to the contrary. Faced with this situation, several higher education institutions in Angola, such as the Higher Polytechnic Institute of Benguela, the Higher Polytechnic Institute Maravilha de Benguela and others, quickly adapted to the new context to ensure the continuity of the teaching and learning process. To this end, nothing more was done than to move forward with emergency measures to ensure the continuity of the teaching and learning process. Public and private higher education institutions quickly adapted face-to-face teaching, sending students remote educational activities.

Teaching activities were resumed, but in a remote format, all without considering the planning of the process, in which the pedagogical strategies, the technical improvement of the institutions and the academic community, as well as the motivational state of those involved, that is, teachers and students, as already mentioned in the previous section, would fit.

The factors listed and the difficulties of paying the high costs for access to the services and equipment required for these technologies cause an increase in the info-exclusion of poor and vulnerable families (Barros, 2020; Rocha, et al., 2020).

It can be seen that during the pandemic period, the current class activities were subject to the many difficulties that the pandemic situation imposed and with all the psychopedagogical consequences that weighed on the students.

EMPIRICAL FRAMEWORK

METHODOLOGY

In order to demonstrate and provide true information in the present study, a research was carried out using the bibliographic method, based on scientific articles and presidential decrees. The same study is based on a quantitative approach due to the fact that it is a study that seeks information about the model adopted, from the students of two higher education institutions, to "translate into numbers, opinions and information to classify and analyze them" (Prodanov & Freitas, 2013).

In a universe of students belonging to the two institutions, ISPB and ISPM, a sample of 73 students was worked, from which very relevant results were obtained.

The questionnaire was used as a data collection instrument, through the form provided by *Google*. The questionnaire is, according to Sampieri, Collado & Lúcio (2012), a set of questions about one or more variables that will be measured.

As for the procedure for collecting data from the sample, the survey was sent to the students, at first via "WhatsApp and Facebook", and as there was a lot of delay, another part of the survey was applied in person in the classroom, as soon as teaching activities resumed.

Research Subjects

The Higher Polytechnic Institute of Benguela had, in that academic year 2020, 931 students enrolled in the Educational Sciences course. On the other hand, the Instituto Superior Politécnico Maravilha had 187 students enrolled in the Computer Engineering course.

A total of 38 ISPB students and 35 ISPM students participated in this study, totaling 73 students. The sample was randomly selected, based on the fact of being a student at one of the two institutes. The choice of institutions was due to the fact that, as a teacher, it is easy for him to establish contacts with students through groups created on social networks, such as Facebook and WhatsApp.

PRESENTATION AND DISCUSSION OF RESULTS

This section presents and discusses the results achieved during the study to demonstrate the consequences of remote education in the context of higher education during the Covid-19 pandemic. To facilitate the discussion and analysis of the results, the information is organized by categories that are basically represented in the following dimensions: a) characteristics of the students, b) degree of satisfaction with remote education, c) resources and conditions necessary to continue studying and working remotely, d) participation in online classes, e) means used for online classes, e) most used resources, f) type of internet access, g) teacher-guided activities, h) degree of satisfaction with online solutions, i) degree of satisfaction in terms of interaction and collaboration, j) opinion on the *online* classes adopted during the emergency period, l) solution to facilitate the teaching and learning process in the Covid 19 phase.

A: Characteristics of the students

As already mentioned, the questionnaire was used as a data collection instrument, applied to 73 students, 35 of whom are from ISPM and 38 are from ISPB. There are 4 first-year students, 8 second-year students, 37 third-year students, 19 fourth-year students, and 5 fifth-year students, belonging to the two institutes.

In terms of gender, 38 are women and 34 are men, with a difference of 1 being those who preferred not to say anything.

Regarding the characteristics of the students, the study indicates that, of the approximately 73 students interviewed, 76.4% live in Benguela and 23.6% live outside Benguela. In other words, most of the students surveyed live right near the school where they study and a few others live in places a little further away. Of the students questioned, 54.9% are working students, 35.2% are unemployed and another 9.9% prefer not to say. Regarding income, 42.5% have their own income, 49.3% do not have their own income and 8.2% prefer not to inform.

B: Satisfaction with remote education

Table 1: Remote Education

Degree of satisfaction	%
Very dissatisfied	17.8
Unsatisfied	32.9
Not very satisfied	17.8
Satisfied	13.7
Very satisfied	17.8

Source: Questionnaires Applied to ISPB and ISPM Students (QAE-ISPB and ISPM)

Regarding satisfaction with the remote education model, approximately 68.5% were dissatisfied with this teaching modality, while 31.5% were satisfied with it.

C: Features and conditions

Table 2: Features and conditions

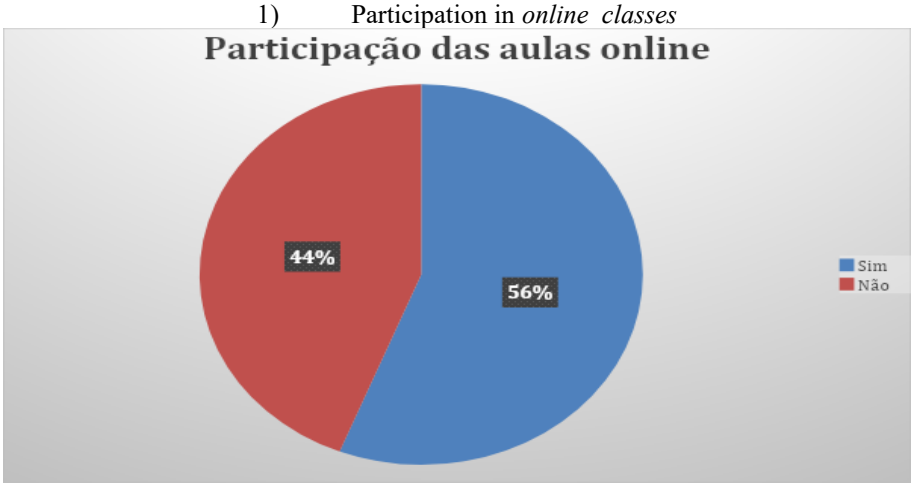
Remote study and work	%
Internet access	21,7
Own computer	13
Shared computer	18,8
Quiet and private space	15,9
Online *Resources*	7,4
Smartphone	23.2

Source: QAE-ISPB and ISPM

According to table 2, the study revealed that 21.7% had access to the internet, 13% had their own computer, 18.8% used a shared computer, 15.9% attended remote classes in a quiet and private environment, 7.4% had access to the internet and 23.2% used their smartphones in class.

The results revealed that students showed greater dissatisfaction with the application of remote education during the pandemic. By looking at the data in table two, it can be seen that the students' dissatisfaction is due to the fact that the conditions and financial resources available during this period do not meet their educational needs. Now, if remote education requires an efficient internet signal, own digital resources and an adequate and quiet environment to carry out the study; and the results show the disparity in means and conditions of study, it is to be expected that students are dissatisfied with the remote model and in the conditions in which it was adopted and applied.

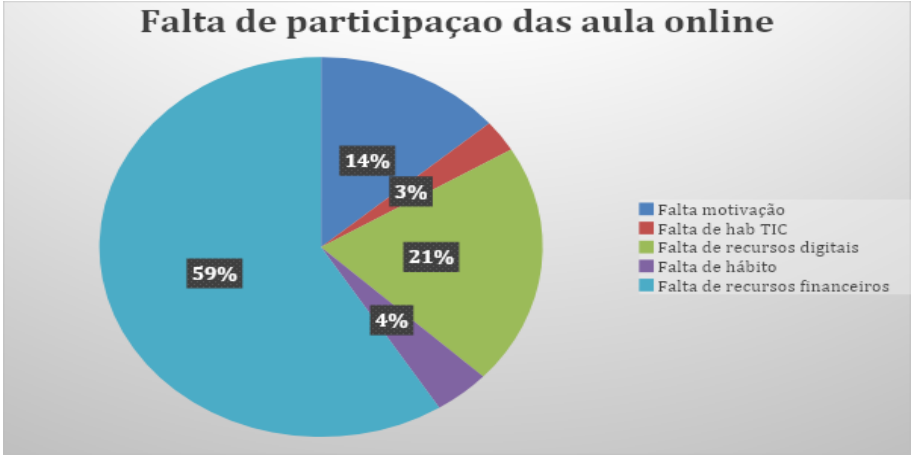
1) Participation in *online classes*



Source: QAE-ISPB and ISPM

Regarding the participation of students in *online* classes, the results of our study showed that 56% answered yes, while 44% answered that they did not participate in *online classes*.

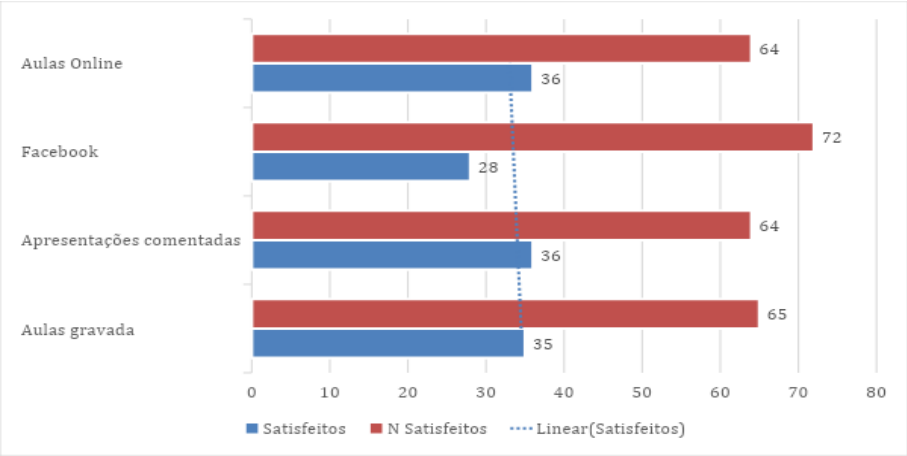
In the following graph, the possible reasons that led students to miss classes in a remote system that were adopted in the period of Covid-19 by higher education institutions in Benguela are pointed out.



Source: QAE-ISPB and ISPM

In this domain related to lack of participation in classes, the graph showed that 13.7% was due to lack of motivation, 2.7% due to lack of ICT skills, 20.5% due to lack of digital resources, 4.1% due to lack of habit and 58.9% due to lack of financial resources to access the internet.

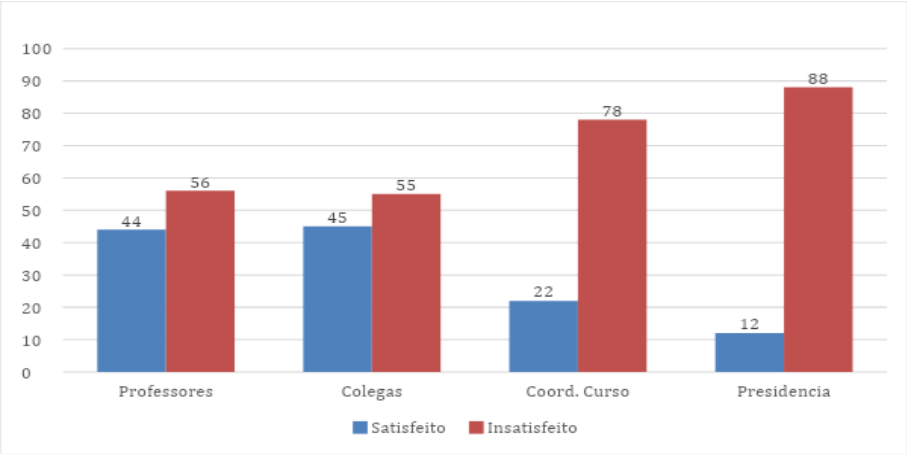
If we consider the reasons why students did not have access to online classes , it can be seen that they could not participate in them due to lack of financial resources, digital resources and lack of motivation, in other words, the main limitations of remote education, in the context of Angolan higher education, is linked to the financial conditions that affect motivation. Therefore, the results of this graph are a fundamental indicator for the definition of strategies in the adoption of a specific model, whether located or remote.



Source: QAE-ISPB and ISPM

Regarding the level of satisfaction with online solutions , the study indicates that 64% of participants were very dissatisfied with online classes , while 36% were satisfied. For the recorded classes, 65% were dissatisfied, against 35% who were satisfied. For the commented presentations, 64% were practically dissatisfied, against 36% who were satisfied. Seventy-two percent were dissatisfied with their use of Facebook, while 28 percent were satisfied.

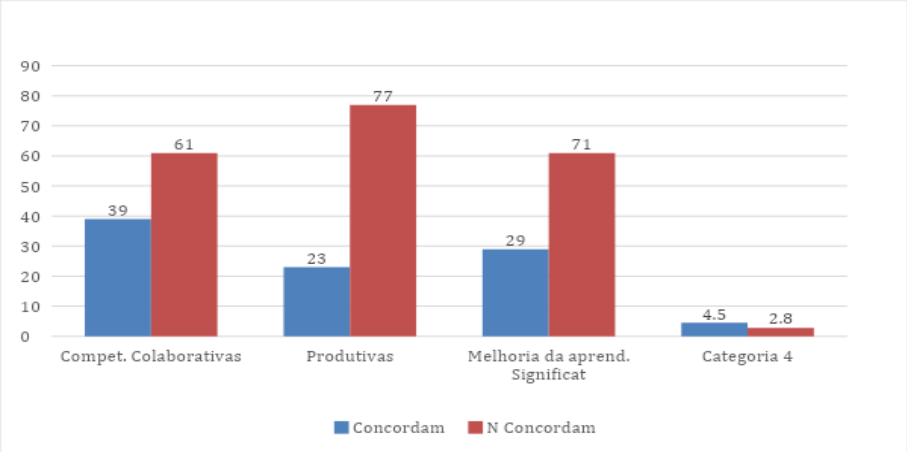
The results showed that students are more dissatisfied with *online* solutions than they are satisfied. As expected, both the uncertainties regarding the sequence of the 2020 school year, as well as the lack of working and teaching and learning conditions, contributed to the students' dissatisfaction with the *online* solutions offered.



Source: QAE-ISPB and ISPM

Regarding the degree of satisfaction with the interaction and collaboration, the study indicates that, in relation to the interaction and collaboration with the teachers, 56% were dissatisfied and 44% were satisfied. Regarding colleagues, 55% were apprehensive and 45% were satisfied. Regarding the course coordination, 78% were dissatisfied and 22% were satisfied. Regarding the school administration, 88% were dissatisfied and 12% were satisfied.

In this respect, it is clear that, in general, the level of collaboration and interaction was somewhat limited in all situations. It is a useful indicator to improve communication strategies between those interested in the teaching and learning process, such as students, teachers and the governing body of institutions, always and especially when the process takes place in an emergency environment where it is thought to apply a remote teaching model.



Source: QAE-ISPB and ISPM

It was decided to measure the impact of online classes, adopted during the emergency period, on student learning, where it was possible to measure that 39% agree that the classes contributed to the development of collaborative skills and 61% do not agree; in the same vein, it was possible to note that 23% of students agree that online classes in this period were productive, while 77% disagree. While 29% agree that *online* classes have significantly improved learning, 71% disagree.

In any case, the study reveals that, regardless of the remote model used, some of the participants in the *online* study developed collaborative skills and the *online* classes contributed to the significant improvement of learning.

FINAL THOUGHTS

This text sought to answer a question raised at the beginning of the research, regarding the implications of the teaching and learning model adopted and applied in the Covid-19 period for education in Higher Education, based on the experiences of ISPB and ISPM.

The research concluded that the emergency caused by Covid-19 forced Higher Education Institutions to adopt a teaching and learning model that dared, in some circumstances, to call Distance Education. However, in fact, it was a remote educational activity.

The fact of resuming something planned for a face-to-face teaching environment and transferring it to a virtual environment, that is, from face-to-face education to remote education, could provide psychological, methodological and even technological discomfort. This view is proportional to the results that the study brings us, when it is realized that the level of dissatisfaction regarding the application of remote education during the pandemic period is much higher. In the same vein, dissatisfaction with the level of interaction and collaboration with all actors in the teaching and learning process during that period is included. However, it is important to note that despite these weaknesses of the model, even so, part of those who participated in the study reveal that *online* classes, that is, the remote model, helped them to develop collaborative skills, and that *online* classes contributed to improving meaningful learning.

Therefore, it is important to emphasize the idea that the sense of pedagogical responsibility to be taken in the implementation of face-to-face or remote education should be redoubled when adopting the distance education model. Because, in this environment, it is important to consider all the factors that contribute to the development of the educational process, that is, the psychological, methodological and technological factor. It is also important to improve the level of interaction and collaboration between the competitors in the process. Hence the permanent need to replan the entire teaching and learning process at the level of higher education, taking into account the unexpected situations that may occur in the world and that accidentally cause changes in purposes and positions, from the point of view of the educational system.

The research points to the development of studies that correlate the socioeconomic conditions and the implication of the remote system in Angolan higher education, from which educational policies can be directed in this education subsystem.

REFERENCES

1. Agência Lusa, CVT. (21 de março de 2020). Angola. Retrieved 14 de Agosto de 2020, from DW Made for Minds: https://www.dw.com/pt-002/covid-19-angola-confirma-primeiros-dois-casos/a-52869696

2. Angop: Agência Angola Press. (27 de Junho de 2019). Ciência e Tecnologia. Angop: Agência Angola Press: http://m.portalangop.co.ao/angola/pt_pt/noticias/ciencia-e-tecnologia/2019/5/26/Angola-necessita-aumentar-taxa-conectividade-internet,46ed6ec2-e1e4-4fba-9463-ef3bcd277283.html.

3. Barros, L. M. (2020). Editorial inovação no Ensino Superior como estratégia de enfrentamento da COVID-19, 3 –5.

4. Carlos, J. (25 de Outubro de 2018). NOTÍCIAS/ANGOLA. WD Made for Minds: https://www.dw.com/pt-002/angola-procura-f%C3%B3rmula-ideal-para-baixar-custos-de-internet/a-46045617

5. Diário da República. (25 de Maio de 2020). Decreto Presidencial n.º 142/20;DECLARAÇÃO DA SITUAÇÃO DE CALAMIDADE, p. 3081. Retrieved 18 de Agosto de 2020, from https://www.tralac.org/documents/resources/covid-19/countries/3679-angola-statement-on-covid-19-pandemic-25-may-2020/file.html

6. Gomes, D. (23 de 12 de 2020). O que é a EaD. Retrieved 1 de Janeiro de 2021, from Samba Tech: https://sambatech.com/blog/insights/o-que-e-ead/

7. IPOG. (25 de Abril de 2020). Educação: aula remota. Ipog: https://blog.ipog.edu.br/educacao/aula-remota/

8. Joy, C., Moreira, M. M., & Rocha, S. D. (24 de Maio de 2020). Research Gate. Educação a Distância ou Atividade Educacional Remota Emergencial: em busca do elo perdido da educação escolar em tempos de COVID-19. https://doi.org/10.33448/rsd-v9i7.4299

9. Kataya, V. (2019). Desenvolvimento Profissional Docente em TIC: Um projecto para uma Instituição do Ensino superior em Angola. Lisboa: Universidade de Lisboa.

10. Lourenço, A. A., & Paiva, M. O. (Agosto de 2010). A motivação escolar e o processo de aprendizagem. Ciência e Cognição, 15(2), pp. 132-141.

11. Luamba, M. (02 de Julho de 2020). NOTÍCIAS / ANGOLA. DW Made for Minds: https://www.dw.com/pt-002/angola-universidades-privadas-%C3%A0-beira-do-colapso/a-54032325

12. Massala, G. (02 de Julho de 2019). Angola, Internet. Retrieved 13 de Outubro de 2021, from Mais Angola, Mais Tecnologia: [https://www.menosfios.com/angola-deve-aumentar-urgentemente-a-

taxa-de-conectividade-a-internet/](https://www.menosfios.com/angola-deve-aumentar-urgentemente-a-taxa-de-conectividade-a-internet/)

13. Melo, M. S., & Oliveira, E. A. (23 de Abril de 2019). Educação a Distância: Desafios da modalidade para uma Educação 4.0. Revista Interdisciplinar de Tecnologias e Educação, 5(1). Retrieved 25 de Maio de 2020, from http://rinte.ifsp.edu.br/index.php/RInTE/article/view/473

14. ONU News. (17 de Março de 2020). story. Retrieved 02 de Agosto de 2020, from news.un.or: https://news.un.org/pt/story/2020/03/1706881

15. Prodanov, C. C., & Freitas, E. C. (2013). Metodologia do Trabalho Cientifico: Métodos e técnicas de Pesquisa e do trabalho académico. Novo Hamburgo- Rio Grande do Sul- Brasil: Feevale.

16. Sae Digital. (Abril de 2020). Aulas Remotas. SAE.Digital: https://sae.digital/aulas-remotas/

17. Sampieri, R. H., Collado, C. F., & Lucio, M. d. (2012). Metodologia de Pesquisa. S. Paulo: Penso Editora.

18. Sacata, N. R. C., & Inglês, P. J. Q. (2023). A rejeição do isolamento social no contexto da pandemia em Angola: análise sociológica sobre a interrupção do quotidiano dos kupapatas em Angola. Revista Caribeña de Ciencias Sociales, 12(1), 409-429. from: https://ojs.southfloridapublishing.com/ojs/index.php/rccs/article/view/2649

19. Silva, V., & Júnior, C. (24 de Abril de 2020). Novo Decreto Presidencial sobre o Estado de Emergência. Jornal de Angola. Retrieved 20 de Agosto de 2020, from http://jornaldeangola.sapo.ao/politica/novo-decreto-presidencial-sobre-o-estado-de-emergência