

CHALLENGES OF HIGHER EDUCATION IN TIMES OF PANDEMIC: REPORT ON THE EXPERIENCE OF DISTANCE LEARNING COURSES AT THE FEDERAL UNIVERSITY OF TOCANTINS, BRAZIL

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Abstract

In Brazil, during the COVID-19 pandemic, higher education was widely affected. Of the country's 69 public universities, 54 had their classes suspended, totaling over 870,000 students with interrupted studies. Nevertheless, many universities offering distance-learning courses have not suspended classes, as is the case at the Federal University of Tocantins (UFT). After ninety days of social isolation, the pedagogical coordination of the Directorate of Educational Technology (DTE), during the monitoring of the virtual rooms noticed an "absence" of the student of the modality the distance observed by the non-delivery of activities in the virtual learning environment (AVA) Moodle, as well as the lack of access to AVA. Faced with this situation, the pedagogical team prepared a Survey of information on the conditions of students of the undergraduate courses of UFT and their family groups, during the pandemic of COVID-19. The form was sent by e-mail to 904 students enrolled in UFT's distance learning courses, of which 243 were answered. The results show that financial and emotional problems affected the students' academic performance during the semester in which social isolation occurred.

Keywords: Higher education, distance learning, pandemic, academic performance, school dropout.

1. Introduction

This article presents the results of information obtained from undergraduate students of the distance-learning (EaD) modality at UFT. The necessity of this study was conducted because of the virtual absence of many students, evidenced by the lack of posting activities within the deadline set by teachers or the low frequency of access in Moodle. Considering the Pandemic situation by COVID-19 that extends to more than three months, the hypothesis was raised that the distance-learning students (EaD) and/or their families, could be with

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health problems, financial difficulties and/or even emotional disorders, and, consequently, affecting their academic performance.

In this regard, a tool developed to obtain information that would provide an overview of the situation of students and, at the same time, help to think about strategies for reception, attention, support pedagogical help, including for teachers.

This article is organized in four sections: the first presents the methodology of the research; the second section presents the scenario of the study (context); the third section dedicated to results and discussions. The final section follows the directions of the DTE/UFT pedagogical coordination regarding strategic actions to be obtained in the short, medium, and long term to meet the demands and needs of the students raised in this research.

1. Research Methodology

The quantitative and qualitative research sought to record a picture of the reality experienced by students at the time of the pandemic. A Google Forms questionnaire composed with twenty questions in which three were open questions and the others closed with multiple choice. The form was widely disseminated on social networks (including WhatsApp groups of the classes). In the universe of 907 distance learning undergraduate students, 241 answered the form. We considered the sample valid, although there could have been a larger acceptance of responses by students.

The first part of the form included questions regarding the socioeconomic profile and health status of students and family members focusing on the extent to which academic performance were affected in consequence of the pandemic. The second part of the form sought to know the reality of access and internet equipment of students, as well as locations and conditions of access. The last questions in the form directed to the student's academic performance, study conditions, tutoring follow-up, and course management evaluation in this crucial pandemic moment.

Lejano (2006) states that a certain phenomenon can only be understood by someone who has experienced or lived in the context of the facts. In this context, the application of the forms to distant learning students (EaD) from UFT has achieved the purpose of knowing their socioeconomic reality, health conditions, access to technological means and the impact of the pandemic situation on their academic performance.

2. Research Context

The state of Tocantins, located in the North of Brazil, has about one and a half million inhabitants. Consisting of 139 municipalities, Tocantins has an area of 277,720.520km², the population density is 4.2 inhabitants per square kilometer and the illiteracy rate varies on average by 13% (IBGE, 2015). The local economy generated by extractive agriculture, cattle raising and commerce. An IBGE study of the poverty map in Brazilian states revealed that it reached some municipalities in Tocantins with an average percentage of 49% in 2003. The same study revealed three municipalities with a poverty index above 80%: Campos Lindos (80.63%), Mateiros (81.54%) and Muricilândia (81.82%) which led the ranking of the poverty index in Brazil at the time.

Recent data from IBGE (2018) revealed that 71.5% of Tocantins households have access to the internet and among the most used devices to access the network is a cell phone (present in 99.1% of the state domiciles). Although the research highlights an increase in the number of residences with internet, a considerable percentage of 28.5% of residences still has not used the net, in 2018. The three reasons highlighted by the respondents of the survey to justify the absence of Internet were lack of interest in accessing (34.1%), no resident knew how to use the Internet (23.2%) and access service was expensive (19.3%). In Tocantins there are still problems related to the quality of access and lack of connection portals in some cities of the countryside. Therefore, the challenge of UFT goes beyond promoting training courses and continued education mediated by technologies in the state, but dealing with the difficulties of access, infrastructure and quality of the Internet in the region.

Recent data on Higher Education in Tocantins (INEP, 2015), reveal that the state has 27 institutions (among universities, university centers, federal and technological colleges and institutes) thus distributed: 2 federal institutions (UFT and IFTO), 1 state university (UNITINS), 2 university centers (UNIRG and ULBRA) and 22 private colleges. Of the 139 municipalities, only 17 (seventeen) have higher education institutions or university campus. These data emphasizes the importance of distance education in the state, since it can reach the municipalities of the provincial towns.

Currently, with sixteen years of creation, UFT has established itself as an important institution to promote free and quality higher education in the region. In 2019, the UFT

offered 64 courses of undergraduate education in person, 5 distance-learning courses, 39 academic master's courses and 9 doctorate programs, serving over 18 thousand students. The distance learning courses at UFT are part of the Open University of Brazil (UAB) Program. There are 907 students enrolled in these programs, distributed in 23 poles in the city districts of Tocantins. The face-to-face support centers are fundamental in the UAB's distance education model. The student must be present on weekends at the complex for the development of face-to-face activities, with a minimum attendance of 75%, and during the week, he will develop the distance activities proposed by the professor of the subject.

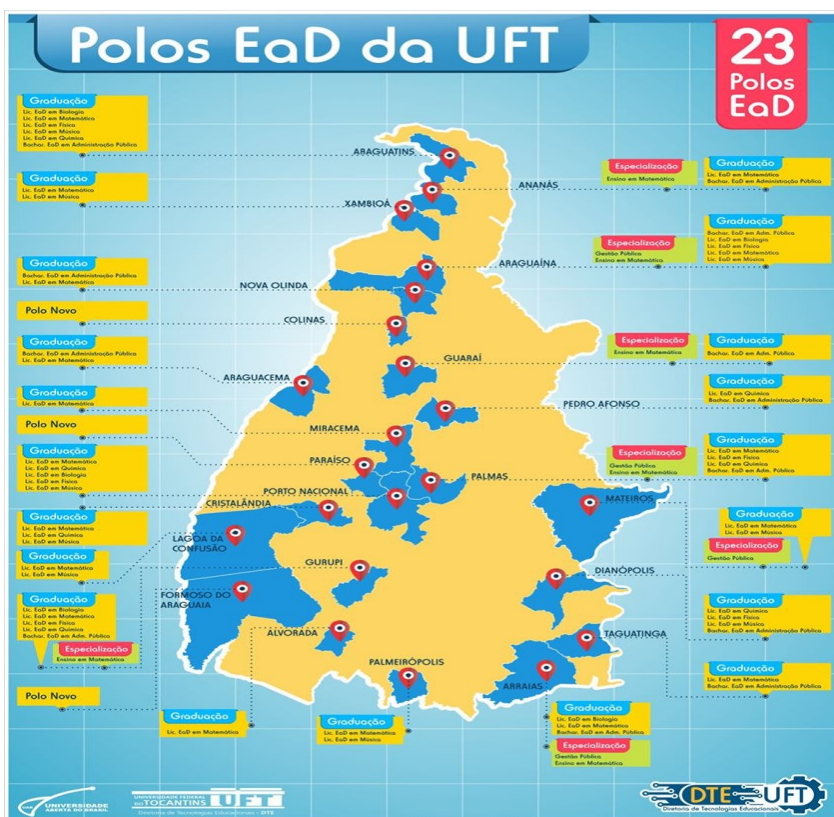
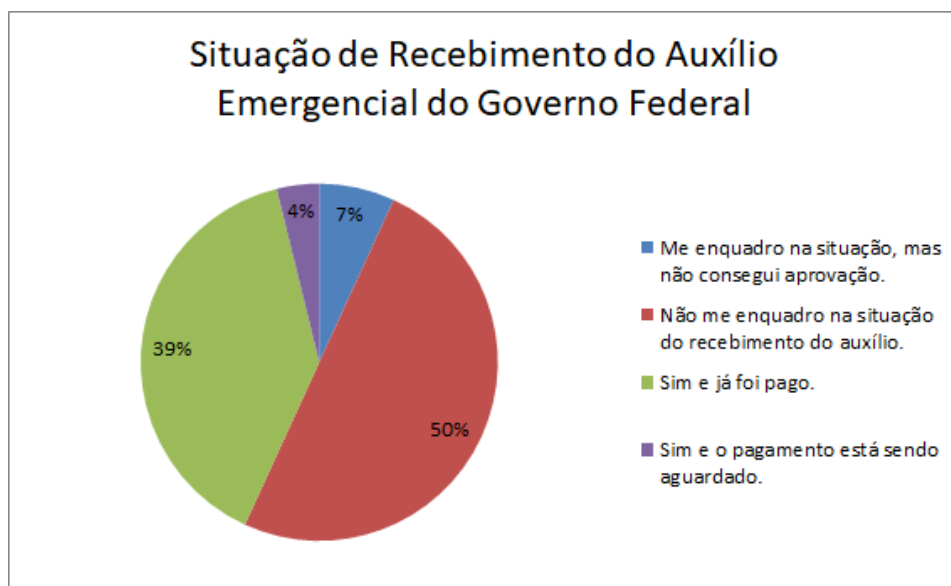


Image 1 - Distribution of the face-to-face support centers in Tocantins
Source: DTE fan page.

Thus, in this model of distance education, the pedagogical mediation of the teacher and the tutor are indispensable for the good progress of the course. The face-to-face meetings at the school centers are an important support for these students to clarify their doubts with their tutors and to establish links with their colleagues through study groups.

3. Results and discussions

In the purpose of knowing the socioeconomic reality of the students, the aptitude parameter to receive emergency aid from the federal government of R\$ 600.00 (six hundred reais) during the COVID 19 pandemic has been adapted as support. Those eligible to receive this aid are the unemployed, informal workers, micro-entrepreneurs, individual taxpayers of the National Social Security Institute (INSS), people over 18 years of age who meet the requirements of average monthly income of up to half minimum wages per person (R\$ 522.50); up to three minimum wages per family (R\$ 3,135.00), until March 20, 2020 . Chart 1 shows the number of distant learning students (EaD) who receive aid from the federal government.



Graph 1 - Receipt of emergency aid from the federal government

Source: Authors' elaboration

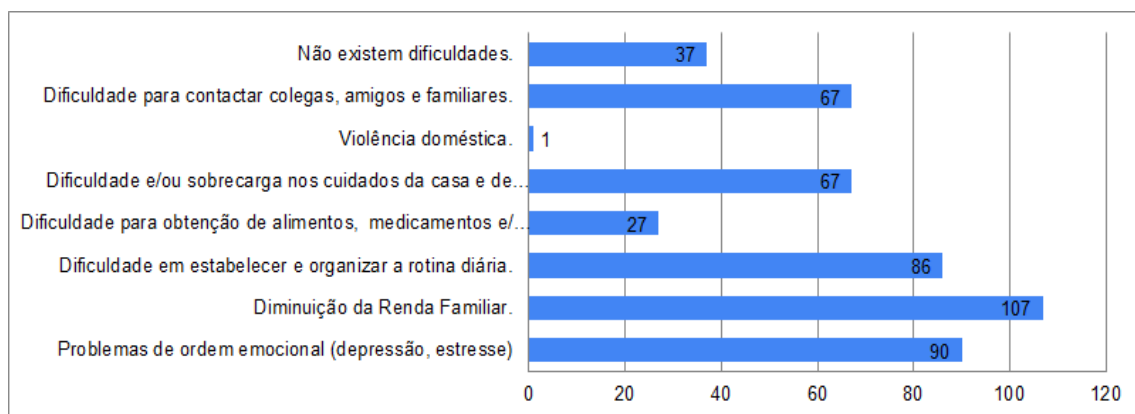
These statistics reveal that almost half of them belong to the social group that presents socio-economic vulnerability, which also portrays the reality of Tocantins.

About the working conditions and income of students and their families during this period of pandemic, the reality is worse, so much, so that 60% of respondents indicate that they were affected economically as shown in Graph 2.

The statistics reveal that only 33.8% stated that their jobs were not affected by the pandemic, the other respondents claimed loss of employment (12.1%), self-employment

impaired (20.4%), temporary suspension of contract (10%), commercial enterprise affected (3.3%), among other specific situations. Considering that most distant learning students (EaD) are already adults and working, the employment situation is an important variant for the support of their families.

Other problems addressed by students, besides those of an economic nature, are emotional symptoms, work overload, and difficulty in organizing study time, as can be seen in Graph 3.



Graph 3 - Difficulties reported by students

Source: Author's elaboration.

It is noticeable that the decrease in family income is the greatest concern of the students, followed by emotional problems (depression and stress), and after the difficulty to organize a daily routine. The workload in caring for people with special needs during the pandemic was also noticeable.

Students were then asked, whether these difficulties affected their performance in academic activities in any way. Of the 221 respondents, 79 (35.7%) responded that it did not, 20 (9%) did not respond, and 122 (55.2%) responded yes. The box 1 below summarizes the responses with the respective indications of situations experienced.

Yes. Being at home, in home office brought difficulties in aligning my schedule and fulfilling my activities.
Yes... because everyone at home is taking remote classes and we only have one computer, therefore it has jeopardized some moments due to the volume of activities.
Yes. There were moments of despair, panic, worry, fear and discouragement. Dropout of some courses but now I am trying to get back in control.
Yes, because of the fear, I left my house and went to the countryside for over 60

days.
Yes, during this period of calamity in public health my region's internet has been overloaded. Because of this I have difficulty accessing the internet
Yes, because I live in the countryside and we have no cell phone service and no internet.
It did, because I confess that I am working hard all day at the front line of COVID 19, and I am very tired psychologically, and lack of concentration in my studies.

Chart 1 - Situations involving the performance of academic activities
Source: Prepared by the authors

On the students' perception, as revealed in these grafts, it is noticeable that a considerable number of students are experiencing problems of several categories that have affected their academic performance. Reports of depression and anxiety repeated in many responses on the form. These reports are in accordance with previous studies that have shown an increase in the level of depression and anxiety in higher education students (SILVA et. al, 2010; MIRANDA; REIS, FRETIAS, 2017). This fact can be aggravated at higher levels in a pandemic situation (CRUZ, et al, 2020).

Other concerns highlighted in the students' statements include the difficulty in organizing their study agenda, focusing on domestic tasks and carrying out the great demand for course activities in this period of the pandemic. In addition to these, some students judged as difficulties faced the closure of the in-person support centers and at times the lack of help from the in-person tutor who helped them with questions about the course. Others claimed that they took refuge in the countryside and farms to have no contact with the coronavirus, and in turn were without access to the Internet to do the activities of the course. All these issues are of concern and indicate that these students are at their emotional limit at this critical time of pandemic.

When asked if the student or any other person in his or her family group knew someone who had been diagnosed with Covid-19, from the universe of 240 respondents, 62 (25.8%) answered no, 94 (39.2%) mentioned a close person and 80 (33.3%) answered yes, but from a distant person. Regarding the health situation of students and family members, 70% of the respondents said they have people in the family who need special care, which affects the increased workload at home, anxiety or fear of some family member contracting the disease and uncertainty about the future.

Regarding the social isolation of the student and his/her family members, the most prominent is the fact that a considerable part of them needs to relocate in order to maintain the family's financial support.

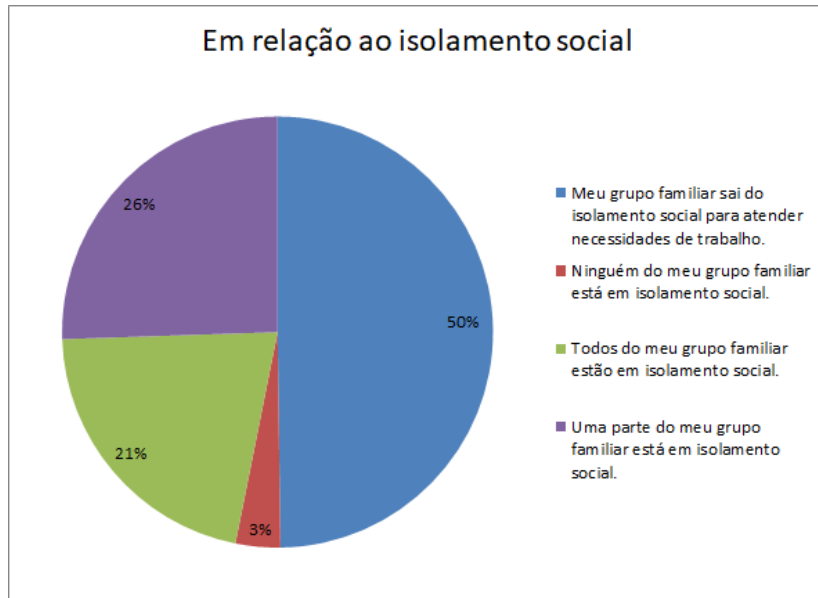


Chart 4 - Social isolation
Source: Authors' elaboration

The students' responses match the reality of most Brazilians, which they need to remain out of social isolation to meet the family's economic needs. According to a study conducted by Bezerra and associates (2020) at the beginning of the pandemic, people adhered well to social isolation, but the need to work and maintain the family financially did not allow everyone in the family group to maintain isolation.

When inquiring students about the implications of social isolation with their performance in the course, the answers follow the parameter of the question about the difficulties faced by students and family members. Of 229 responses, 92 (40.2%) students stated that social isolation did not affect their academic performance; 16 (7%) did not respond, and 121 (52.8%) said they were affected in some way. Among the responses from students who claimed to be affected, the reasons were due to lack of access to the Internet, closing of the face-to-face support centers, lack of concentration in studies due to financial problems, interruption of internships and difficulties in completing the course work.

It is important to emphasize that although distance-learning students at UFT routinely used digital technologies even before the pandemic, this does not mean that they had adequate

devices to access the course outside of the school centers. Thus, the conditions of access to technologies at home during the pandemic were investigated.

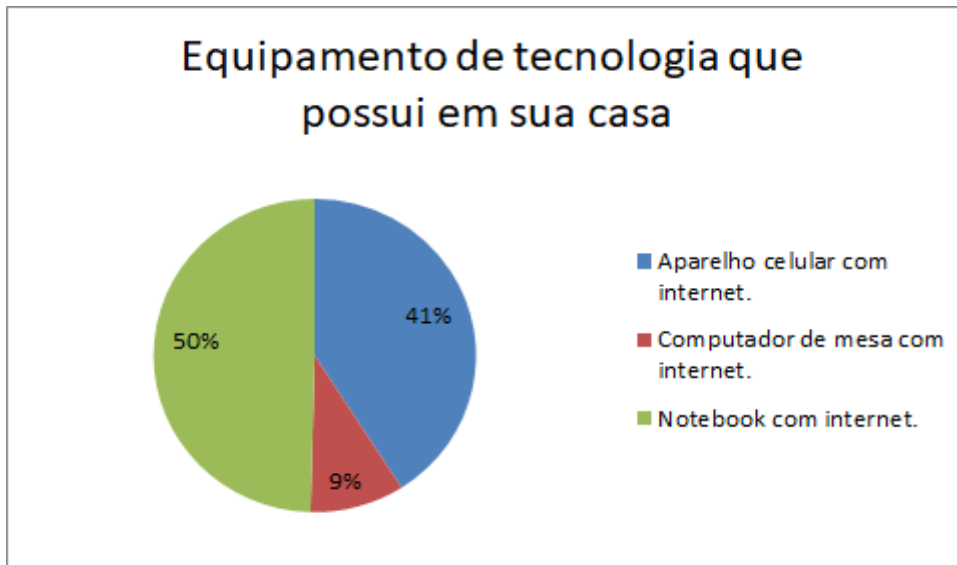


Chart 5 - Students' technology equipment
Source: Prepared by the authors

The statistics reveal that 41% (a considerable number) access the study material via cell phone and 50% of them have an internet notebook. Regarding the place where they access the Internet to perform the activities, 178 (74.5%) students said they develop them at home; 40 (16.7%) do it via cell phone; and 15 (6.3%) do the online activities at the home of friends or family. Only 6 (2.5%) said they did activities exclusively at the school center and at this moment it is closed and with activities suspended.

A little over half of the students, 50.8% said they needed to share technological equipment with their families and 41% of them said they do not have an environment at home to concentrate and develop their studies. The students were questioned how they rated the tutors' monitoring of their activities, 51% considered it excellent and 33% rated it as good performance. It was observed however, that 13% of the students considered the attendance reasonable, 2% considered it bad and 1% think it is very bad. In the open questions of the form about the difficulties faced (questions 7 and 11), some students claimed to miss the more systematic follow-up of the tutor, especially at this critical moment.

The accompanying tutor and teacher in distance learning courses reveals a lot about their social presence. Short Williams and Christie (1976) as a quality that can determine the way people interact and communicate introduced the concept of social presence. As the

guardians of AVA (Virtual Learning Environment), tutors need to promote a sense of belonging to the community among students and also stimulate and promote collaborative learning among themselves (ALVES, MARTINS, 2017). Social presence can be expressed by a welcoming word, also by participating in chats or forums with constructive contributions and sincere praise for the progress of students, or even interacting with the student in social networks.

The students were invited to express themselves in an open question about what they think could be improved in UFT's distance learning courses. In summary, they asked for a greater comprehension from the teachers regarding the volume of activities. They also asked for more time to do the activities and for feedback on the tests, they have taken. Considering the large number of lives and web conference meetings held during the pandemic, students also require this format of communication with teachers and tutors. The students related as possible improvements to the courses addressed other issues such as better comprehension materials, increased attention from the coordinators of the courses and teachers, and the availability of more video lessons.

Among the student's requests, most were specific pedagogical topics of the course, which were sent and solved by the course managers. The e-mails that dealt with psychological help requests were answered with positive messages and forwarded to the Social Support Service, Pedagogical and Psychological section of UFT. Some students (16) left their phone number (WhatsApp). These also received the same support as those reported previously via e-mail.

Concluding remarks

The COVID 19 pandemic revealed many weaknesses in the education system around the planet. Social disparities that have been highlighted, the digital gap between those who have access and those who do not have web access revealed an abyss beyond the accessibility, but the type, quality and place of access, and with how many people the user is sharing his media equipment. For example, users with slow connections, old software and hardware find it difficult to access certain sites also reduce the user's chances of obtaining a rewarding Internet experience by restricting them to using it on truly necessary occasions (ALVES, 2017).

Social vulnerability emphasized during the pandemic. The closure of stores and business has led many people to unemployment and underemployment. Self-employed professionals were out of income and relying only on financial help from the government. All these situations caused tension, fear, insecurity and sometimes, -depressive conditions affecting people (WANG et al., 2020). The students of the distance learning courses (Ead) of the UFT revealed in the research that they faced economic pressure, responsibility to take care of people in vulnerable situations and health problems in the family.

In this context, the pedagogical coordination of Directorate of Educational Technology DTE together with the course coordinators have raised short, medium and long term strategies that can assist the students at this critical moment. Among them are the following:

- Coordinators: be more attentive to the virtual classrooms of the courses and observe the engagement of the tutors and teachers in class also monitor the evasion.
- Tutors: need to give feedback in a maximum of 24 hours and be available to be contacted by students through the web. Do a mapping of students who are absent from virtual learning environment (AVA) or who are not doing the activities.
- Teachers need to have more "social presence" in the courses. This includes present themselves to students by video or web conference, participate in discussion forums, make time available to interact with them.
- In a pandemic situation, teachers need to be more flexible with the number of activities (reduction) and delivery deadlines (extension).

What is evident, after the investigation and analysis of the information is that many students are experiencing emotional and psychological problems like most people in the world, and often all they need is attention. They want to be remembered, seen, to be part of a community. Sometimes distant learning (EaD) is a lonely path, which demands more attention from tutors and teachers in order to make this situation less stressful. A sense of community, solidarity and empathy are increasingly gaining ground in dark times of pandemic. Thus, showing attention and empathy to students at this time is part of the social role of the public university.

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