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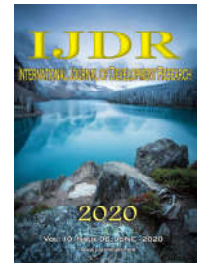
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RESEARCH ARTICLE

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ANALYSIS OF THE APPLICATION OF DISTANCE EDUCATION IN UNIVERSITY EDUCATION IN THE STATE OF AMAZONAS

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ABSTRACT

No teaching method has evolved as much as distance education, in the state of Amazonas this would not be different, especially in higher education. Distance Education is a modality where the student is separated from the teacher and uses several communication technologies around all his learning. The methods used were bibliographic, documentary and quantitative. The researched environment was the capital city of Manaus and the municipality of Maués, with the application of the closed questionnaire aimed at higher education students. Our objective was to question certain nuances as their benefits and challenges for those who study Distance Education in the different locations of the State of Amazonas. The result was the realization that among its many advantages in the execution of education, time is considered the main one, and the loss of deadlines its greatest disadvantage, besides the concept of distance education is already well known by university students. Thus, it is well known that with the passing of time and with the progress of the state's modernization, distance education is gradually becoming the most practical means of teaching.

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INTRODUCTION

Distance Learning or Distance Education emerged as a correspondence course in the year 1728 with a focus on a tachygraphy course. In Brazil, this type of teaching emerged in 1904 for a typing course. This teaching method was only recognized in 1996 as teaching at all levels (undergraduate, basic and technical education). In addition, this teaching has become an ascent due to the evolution of technology. In Amazonas, this modality has been growing in private, public and federal institutions of higher education. Aimed at offering initial and continuing education courses, Distance Education with the use of information and communication technologies is an aggregating element for education. Distance Education is a modality where the student is separated from the teacher and uses several communication technologies around all his learning. This modality is regulated by specific legislation and can be implemented in Education. Distance Education has received different denominations in different countries, such

as: study or education by correspondence; study at home; external studies and among others. The individual who studies or graduated from Distance Education has the same chance in the job market as the one who studied regularly, that is, in the face-to-face mode. It is worth mentioning that the diploma obtained in a Distance Education course is worth as much as the one obtained in a face-to-face course. Before, when the course was not so well known, the distance education professional has already been very discriminated and criticized because of the way he graduated. But today, all that is a thing of the past. The Distance Education modality is not so different from the face-to-face modality, because to enter a college at a distance it is necessary to participate in the selection process as well as in the face-to-face modality and after the process, if the student is approved the same is waiting for the beginning date of the course or as I can say, the beginning of classes. Distance Education is a form of strategy that educational institutions have adopted as a source of advantage in the competitive educational market, in addition to presenting economic advantages in view of maximizing the

profits of the institution. In this way, places of difficult access, such as the interior of Amazonas, are being devoured with innumerable proposals of Distance Learning and this teaching model has stimulated the creation of a government program that allows the access of these students in classrooms without them leaving their municipality or riverside community.

BIBLIOGRAPHIC REVIEW

Theoretical reference is an explicit text of theoretical concepts that helps in the understanding of conceptual guidelines that provide the basis for the construction of arguments that support the study (SAKAMOTO; SILVEIRA, 2019). In this study, it is argued about the application of distance education in university education in the State of Amazonas and the opinions of its users.

Distance Education: The word e-learning encompasses various meanings. Distance education, distance learning, open distance education, among others. According to Pino (2017, p. 33), it says that there is a wide repertoire of definitions for "distance education" and, as technologies evolve, many of these definitions are reworked, he also reports, that some authors focus on the modality's own technical specificities. Carvalho (2017), states that this modality, brought opportunity to several people who did not have time to study in person and/or weekly, much of this is due to the practicality of e-learning to be able to be seen outside a place reserved as an institution and to have flexible schedules for students, thus, the relationship is virtual, where on one side is the student willing to obtain knowledge and on the other, the teacher ready to contribute to the intellectual formation of the student. At first, the history of e-learning in Brazil, as far as it is known, its expansion occurs in the same period in which communication media, such as radio and television, expand in the country.

A chronological historical context is observed and the main milestones of Distance Education in Brazil are the following:

1904 - A professional course in correspondence typing is announced in the Brazil newspaper in the first edition of the classifieds section.

1923 - Henrique Morize and Edgard Roquette Pinto created Rádio Sociedade do Rio de Janeiro, and offered some courses in French, Portuguese, Forestry, French Literature and others.

1934 - Edgard Roquette Pinto offers the services of the Radio for a project of the Municipal Department of Education of the Federal District, making it possible for students to have previous access to leaflets and lesson plans.

1939 - The Monitor Institute was founded in São Paulo, offering professional distance learning courses by correspondence.

1941 - The Brazilian Universal Institute was created, becoming the second institute to offer distance learning courses by correspondence. In that same year the first University of the air appeared, which remained until 1944.

1947 - The new Air University appears with the sponsorship of some private institutions (SENAC, SESC and others) with the objective of offering commercial radio courses, lasting until 1961.

1959 – The Basic Education Movement, a milestone in non-formal education in Brazil, emerges.

1962 – It is founded in the city of São Paulo the Occidental School, of American origin, focused on the area of electronics.

1961 – It was created in Brazil the National Education Framework Guidelines Act.

1967 – The Brazilian Institute of Municipal Administration starts its activities in public education, using the methodology of teaching by correspondence, moreover, in that same year the Padre Landell de Moura Foundation creates its nucleus of E-learning.

1970 – The Minerva Project, a partnership of the Ministry of Education, Father Landell de Moura Foundation and Father Anchieta Foundation, with the goal of using radio in adult education and inclusion, maintained until 1980.

1974 – The Padre Reus Institute is created and courses for elementary school begin on TV Ceará.

1976 – Originated the National Teleducation System.

1979 - The University of Brasilia creates courses broadcasted by newspapers and magazines, which in 1989 is transformed into Centro de Educação Aberta, Continuada, a Distância and released Brazil E-learning.

1981 - The International Center for Regular Studies was founded at the Anglo-American School, which offered primary and secondary distance education.

1983 - SENAC develops a series of radio programs for professional guidance in commerce and services, called "Opening Paths."

1991 - The program "Jornal da Educação - Edição do Professor" is incorporated to TV Escola, becoming a milestone in distance education.

1992 - The Open University of Brasília is created.

1995 - The National Center for Distance Education is created, as well as the Municipal Secretary of Education of Rio de Janeiro, creating MultiRio, which offers elementary education through television programs and printed material. That same year the TV School Program was created.

1996 - The Department of Distance Education was created by the Ministry of Education, with a policy that favored democratization and the quality of Brazilian Education. In addition, this year is considered the official landmark of the emergence of Distance Education in Brazil. It is in this year that the EaD began to be recognized as a modality of education of all levels provided for in Article 80 of the National Education Guidelines and Bases Law, No. 9,394, of December 20, 1996.

2000 - UniRede is formed, a consortium that currently gathers 70 Brazilian public institutions, offering undergraduate, graduate and distance learning courses. In the same year, the Center for Distance Education of the State of Rio de Janeiro also appears.

2002 - CEDERJ is incorporated into the Rio de Janeiro Center for Higher Distance Education Sciences Foundation.

2004 - The Ministry of Education implements several initial and continuing education programs for public school teachers through the EaD.

2005 - The Open University of Brazil is created, a partnership of MEC, states and municipalities.

2005 - E-learning was regulated by Decree 5.622, of 19 December 2005.

2006 - Decree No. 5.773 of May 9, 2006 comes into force, providing for the exercise of the functions of regulation, supervision and evaluation of higher education institutions and undergraduate and graduate courses in the federal education system, including E-learning.

2007 - Decree nº 6303 of December 12, 2007, which amends the provisions of Decree nº 5622, establishing the Guidelines and Bases for National Education, comes into force. According to the MEC (2017), in this period the EaD modality has grown strongly in the country, following the progress of the technological and communication means. According to INEP (2015), a survey was carried out which shows that there are 1,473,000 distance-learning courses offered in the country, which have grown 10% per year since 2010. Currently, there are more than 1.3 million students enrolled, with a 50% growth between 2010 and 2015. It is well known that distance learning has become an increasingly present mode of education in everyone's life. Zawacki-Richter and Anderson (2015, p.10) state that, "distance education has been seen as a business, profit and exploitation opportunity by so-called diploma factories. Much of this is due to the practicality of e-learning being able to be seen outside of a reserved place as an institution and having flexible hours for students.

Characteristics and Satisfaction of the Student in Higher Education to E-learning: Distance Learning – E-learning comprises several courses, open to candidates from basic education, higher education, vocational education and others. The target audience of e-learning are usually people with restricted available time or other routine activity. According to Paixão (2019), the same emphasizes that e-learning is a modality where teacher and student interact physically separated in space and time. Thus, this modality contains some outstanding features such as: willpower and willingness to learn from the student, flexibility of schedules, calendar with dates and deadlines for activities (face-to-face or virtual) more succinct. In e-learning, the student is the main responsible for his learning, because he is the central element of the teaching-learning process and must stick to a new conception in the learning process. Kuhn, Hofler e Silva (2017) use the satisfaction of e-learning users as a synonym for the performance of the learning experience, where the behavior of instructors who, in distance learning courses, play a crucial role in the dynamics of the course, integration and motivation of students. Thus, both student and teacher need to be connected in the same language in order to achieve learning success. It is worth noting that a good structure should also be considered relevant in this context. Marcuzzo, Gubiani, Lopes and Regio (2015) still highlight that satisfaction seems to be an effective tool for the study of the behavior of such students, in addition to presenting a relevant contribution to institutional assessments, thus demonstrating an alternative path for such

improvements in the quality of higher education in relation to e-learning. Thus, it is the duty of the educational institution to offer resources that are pleasing to the student and that make him/her satisfied with its structure.

Distance Education in Amazonas: In the State of Amazonas, as well as in Brazil, the e-learning offers not only practicality and flexibility, but also allows low-income people to study even if they are in more distant regions. The e-learning modality has conquered great space in Amazonas. In a survey conducted by Andrade et al. (2020), 87.5% of students study in private institutions. This significant is a reflection of the movement of the mercantilization of education that has been intensifying in recent years and occupying more and more spaces, especially in the interior of the State, where it is not common a good physical structure to receive public and private institutions and higher education. In addition, e-learning offers attractions such as: more accessible value, flexibility and the promise of a diploma identical to that offered by face-to-face courses (ANDRADE et al., 2020). This study provides a comparison between the city of Manaus and the city of Maués, both located in Amazonas, in relation to distance learning, difficulties and resources that both offer. The e-learning in the State of Amazonas has had an increase in the last years due to the improvement of technology with the advent of smartphones and the more stable access to the Internet that has made possible new means of use of Distance Education. Another measure adopted that favored the EaD in the State was the publication in the Official Gazette - DOU by the Ministry of Education - MEC, where Ordinance No. 1,428, establishes that the courses of graduation in person, can offer up to 40% (forty percent) discount in classes at distance, replacing the previous limit that was 20% (twenty percent) (BRAZIL, 2018).

Distance Education Centre of the Federal University of Amazonas: The Center for Distance Education, is a supplementary accredited body that has been working since 2006 at the Federal University of Amazonas for continuing education, undergraduate and graduate courses in the distance learning modality offered in some municipalities in the interior and capital of the State of Amazonas, Roraima and Acre in which the form of entry is through a formal vestibular. The center offers in virtual learning environments the courses of Public Administration, Visual Arts, Biology, Agricultural Sciences and Physical Education (undergraduate) and Municipal Management, Public Management, Health Management, Teaching Philosophy, Media in Education and Mathematics (postgraduate) where the face-to-face meetings are weekly or biweekly. The e-learning model applied at the Federal University of Amazonas aims to change the student's attitude towards his activities, which in fact needs to exercise his autonomy, where the "virtual spaces" facilitate the practice of learning. The municipalities in the State of Amazonas, where the educational center offers its courses, are called Polo (coordinated by a teacher to support the activities). Each Polo receives a kit consisting of 30 (thirty) computers, a printer, a wireless router and an antenna and uses the virtual environment called Virtual Activities Environment for the classes.

MATERIALS AND METHODS

Three types of research were addressed for this case study in order to identify its emerging aspects in relation to the

Distance Learning method and a material for doing opinion research. Bibliographical Research, which is based on scientific studies, will be used for the construction of knowledge and for the development of research that it will address: E-learning, Higher Education, Center for Distance Education and the State of Amazonas. Documental Research will be used through non-scientific information, with data taken from public agencies and journalistic columns, but with data referring to the subject addressed. In the quantitative research will be applied the multiple choice questionnaire that will contain 14 closed questions, with the purpose of evaluating the knowledge of students of Higher Education about the e-learning. The material to be used in the quantitative research will be Google Forms in the creation of questionnaires and in the formulation of graphs. Google Forms is a free service for creating online forms. Besides being a free tool, it is compatible with any browser and operating system. When designing the questions asked in the survey, we try to investigate more about the subject matter and the effects it has on people. The research tool will be applied in higher education universities and after the data collection, the information will be analyzed and put into graphs to identify the percentage of satisfaction with the e-learning.

DISCUSSION OF RESULTS

This work is characterized by quantitative research, since the author presents through graphs the statistical results of his analyses. The research instrument used was a questionnaire with 14 (Fourteen) closed questions, directed to students of the Universities of Higher Education of the State of Amazonas in order to collect data about the satisfaction of distance learning. The questionnaire (Attachment A) was applied to students electronically by the Google application known as Google Forms, which assists in creating online forms and graphs with the survey results. In the elaboration of the questionnaire questions, we tried to analyze the application of e-learning in university education in the State of Amazonas and the opinions of its users. The sample corresponded to 114 (one hundred and fourteen) university students from the State of Amazonas who have already studied or are studying using the e-learning method, corresponding to almost 100% of the sample, as shown in Figure 1 and 2.



Source: Authors, (2020).

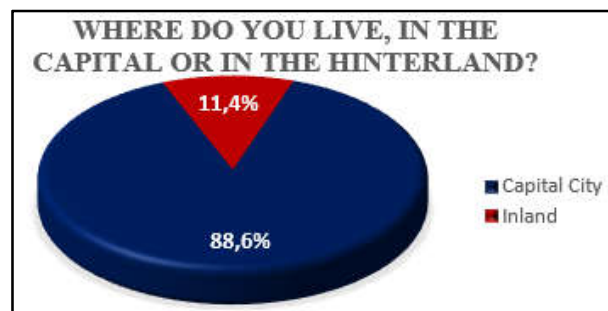
Graph 1. Introducing students' knowledge to Distance Learning



Source: Authors, (2020).

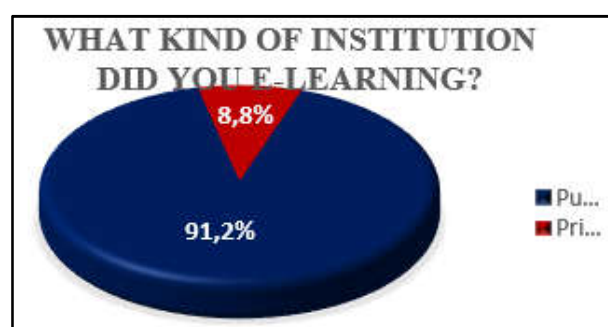
Graph 2. Displays the percentage of students who have taken some type of e-learning course

The first graph indicates that 99.1% of those interviewed said they knew the e-learning, and less than 0.9% were unaware of this type of education, while the second graph indicates that 83.3% of the sample had already taken some type of course in this modality and 16.7% had not.



Source: Authors, (2020).

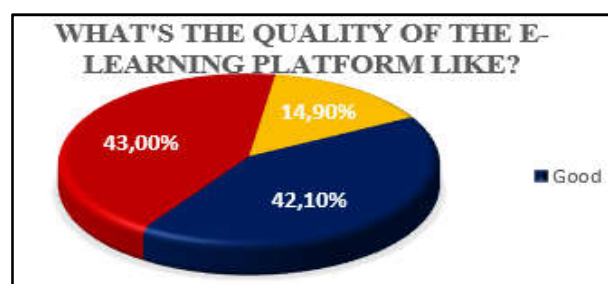
Graph 3. Presents the student's geographical location



Source: Authors, (2020).

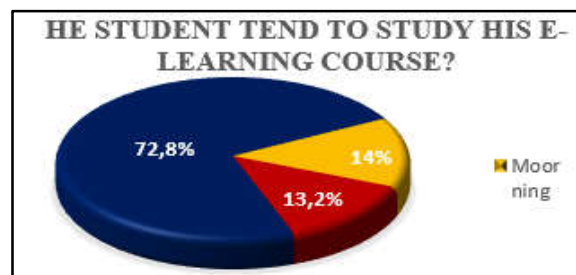
Graph 4. Presents the type of Institution in which the student studied Distance Learning

In graph 3, it is understood that a large part of the participants, about 88.6% are students from the capital, and only 11.4% are students from the interior of the State (graph 3). While Graph 4 shows that the majority of the participants belong to Private Institutions, about 91.2% and only 8.8% are from Public Institutions.



Source: Authors, (2020).

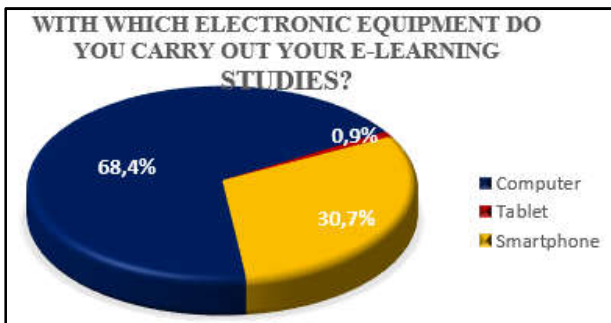
Graph 5. Displays the quality of the platform used by students in E-learning



Source: Authors, (2020).

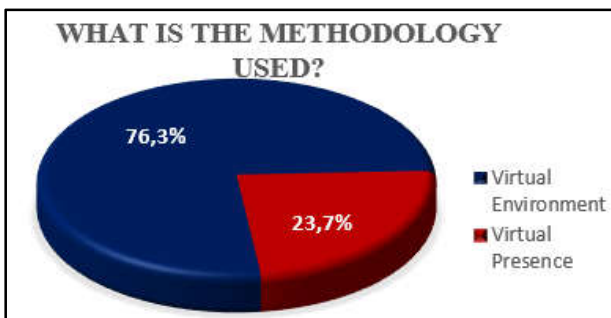
Graph 6. Shows the time the student tends to study their Distance Education course

In Figure 3, we saw Graph 5 that points out the quality of the e-learning platform, where 43% of the interviewees believe to be 43% Median, 42,1% Good and 14,9% Bad. While Graph 6 indicates that students tend to study their Distance Learning course more at night, being about 72,8% at night, 14% in the morning, 13,2% in the afternoon.



Source: Authors, (2020).

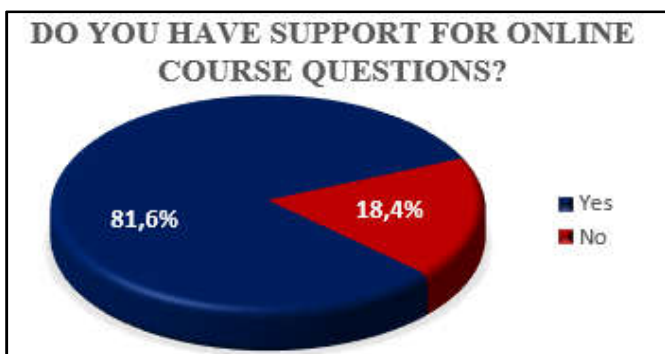
Graph 7. Displays the type of electronic equipment used in EaD studies



Source: Authors, (2020).

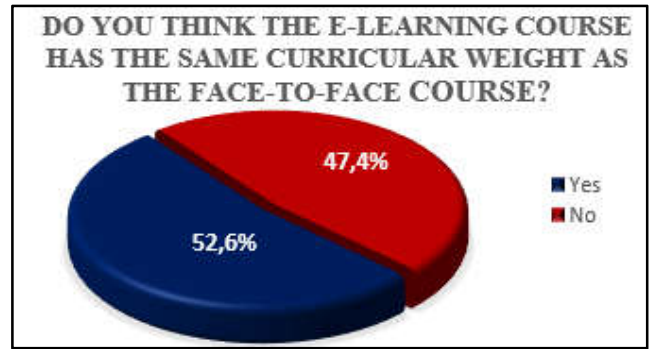
Graph 8. Displays the type of methodology used in e-learning

In Figure 4, the question referred to the platform used to watch e-learning, where 68.4% of the sample pointed to the Computer as a form of access and 30.7% to the smartphone. The Tablet did not receive any score. About the methodology used, Graph 8, points out that 76.3% of students use the Virtual Environment and 23.7% the Virtual Presence. Graph 7, shows that even with the popularization of the cell phone, most of the people who study e-learning attend the classes in the computer and only a quarter of the interviewed students make the Distance learning by the Virtual Presential method.



Source: Authors, (2020).

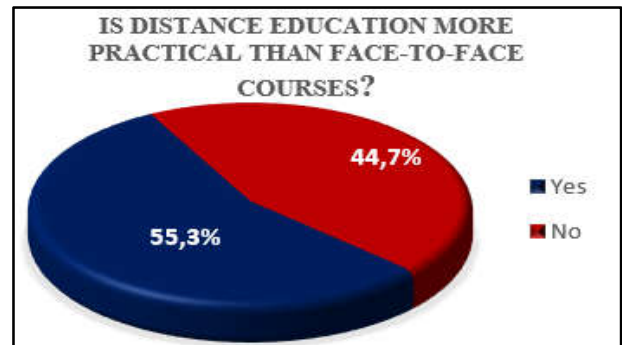
Graph 9. Shows whether the student has support in answering questions about the e-learning course



Source: Authors, (2020).

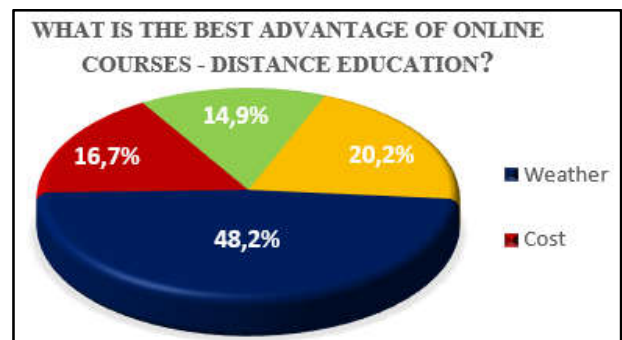
Graph 10. Displays the curricular weight of e-learning

In Figure 5, Graph 9, where the interviewees indicate whether there is support for clearing doubts from the e-learning course, where 81,6% of the students confirmed that they have support and 18,4% do not have this service. Graph 10 shows if the students consider the e-learning with the same curricular weight as the face-to-face course, where 52,6% consider the modality with the same level of 47,4% the students do not consider.



Source: Authors, (2020).

Graph 11. Presents the practicality of the e-learning course.

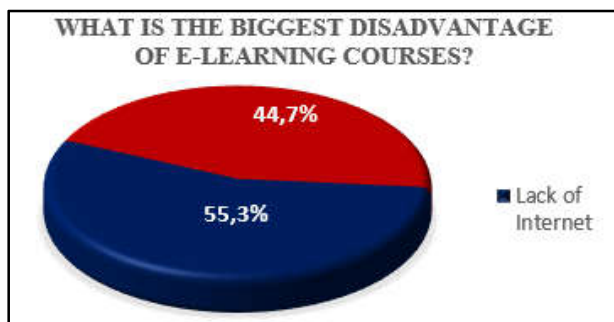


Source: Authors, (2020).

Graph 12. Shows the best advantage over e-learning

In Figure 6, Graph 11, 55,3% of those interviewed believe that e-learning is more practical than face-to-face courses and 44,7% do not. As for graph 12, the students indicate that the Time factor is the best advantage of e-learning, corresponding to 48,2% of the sample, 20,2% point to Mobility, 16,7% accuse the Cost and 14,9% of the students indicate the Versatility. In Figure 7 the chart points out the biggest disadvantage of e-learning courses, 55,3% of the interviewees consider the Lack of Internet, and 44,7% of the students consider the Loss of deadlines. According to reports described by some students, it occurs many times the non-receipt of the

e-mail informing about the activities and due to this condition, they end up losing the deadline for the delivery of the exercises. Graph 14 asked if the proposed e-learning course was satisfactory, where 74.6% of the interviewees answered yes and 25.4% of the students did not.



Source: Authors, (2020).

Graph 13. Presents the great disadvantage in relation to the e-learning



Source: Authors, (2020).

Graph 14. Presents the satisfaction of e-learning

The distance learning model breaks paradigms in relation to the way it is taught. In the course of the survey, it is notorious that students from different locations share similar problems with each other. Despite these difficulties, they do not fail to continue their studies. However, the efficacy of e-learning can be proved more and more by the growth of courses offered, new proposals from the Government and researches with students of this modality such as this proposal of analysis of application of distance education in university education in the State of Amazonas.

Conclusion

As seen in the development, the questionnaire was executed in a part of the territory of the state of Amazonas in the municipalities of Manaus and Maués, the distance learning studies were observed only in private institutions and in the Distance Learning Center, which gave an estimate of how the online studies are being in these regions bringing how the students are seeing this type of method today. According to the results, distance learning has become known and studied in higher education, students already have some knowledge on the subject, and 83,3% of those interviewed have already done and criticized for its improvement, with the results, it was found that among its many advantages in the execution of teaching, time with 48,2% is considered the main one, which is more used at night, tends to be more widely used in computers even if the advent of smartphones and tablets has already reached the state. Distance learning still has much to improve in the region, especially considering the modernization that is

taking place in the state, considering factors such as mobility, cost, and time. There are those who do not find the study at such a useful distance or in such a degree of relevance as the face-to-face study, besides the fact that the method has certain flaws, such as the lack of internet that depending on the location can be caused by several factors, from financial issues to the lack of energy, to the loss of time due to distraction, forgetfulness or lack of communication of the students with the institution that provides the e-learning. However, with recent events, e-learning has become the best way to maintain studies in the midst of this time of crisis.

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