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TRAINEES IN BIOLOGICAL SCIENCES IN TIMES OF PANDEMIC: REPORTS FROM UNIVERSITY STUDENTS

GRADUATES IN BIOLOGICAL SCIENCES IN TIMES OF PANDEMIC: REPORTS FROM UNIVERSITY STUDENTS

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SUMMARY
The Pedagogical Political Project of the Course - PPC, Degree in Biological Sciences, UNEAL, aims to train teacher-biologists capable of understanding social demands, reading the situation in which their professional performance will affect with a critical and knowledgeable look at socioeconomic reality, cultural and environmental environment in which they are inserted, from the perspective of sustainability. Unexpectedly, the world was affected. Social isolation, resulting from the Covid-19 pandemic, has had repercussions and impacts on various aspects of life on a global scale in the social, economic, political, cultural, technological and health spheres. In Brazil and around the world, it affected education in the schooling and training process, at all levels of formal education. The insertion of remote teaching has become an alternative to face these new challenges. Finally, this article aims to identify the difficulties faced by Biological Sciences students in remote teaching in times of pandemic and their post-training perspective. The undergraduates of the Biological LC course in the final semesters took part in this research. Therefore, a semi-structured questionnaire was used to carry out the research, applied virtually, considering the pandemic. The results regarding the difficulties in remote teaching emerge: lack of practice, flaws in the methodological approach, as well as technological resources and the family environment, disfavoring teaching in continuing education. sciences and/or biology.
Keyword: Teacher training; Remote Teaching; COVID-19; Education.

ABSTRACT
The Political Pedagogical Project of the Course - PPC, of a Licentiate in Biological Sciences, UNEAL, aims to train a professor-biologist capable of understanding social demands, making readings of the situation where their professional performance will focus on a critical and knowledgeable look at the socioeconomic reality, cultural and environmental in which they are inserted, from the perspective of sustainability. Unexpectedly, the world was affected. The social isolation resulting from the Covid-19 pandemic has had repercussions and impacts on various aspects of life on a global scale in the social, economic, political, cultural, technological and health spheres. In Brazil and in the world, it affected education in the schooling and training process, at all levels of formal education. The insertion of remote learning has become an alternative to face these new challenges. Finally, this article aims to identify the difficulties faced by Biological Sciences students in remote education in times of pandemic and their post-education perspective. Graduates of the LC Biology course of the final semesters took part in this research. Thus, for the research, a semi-structured questionnaire was used, applied by virtual means, considering the moment of pandemic. The results regarding the difficulties in remote

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teaching arise: lack of practice, flaws in the methodological approach, as well as technological resources and the family environment disfavoring teaching in continuing education. The interest is between masters, doctorates or specialization, working in different areas of teaching science and/or biology.
Keywords: Teacher Training; Remote Teaching; COVID-19, Teaching; Education

1. INTRODUCTION

Since March 2020, with the beginning of social isolation, due to the new coronavirus pandemic, COVID-19, hundreds of students began to worry about continuing their studies during the pandemic, possible questions about their academic training, the methodologies of teaching, practices and whether learning would be difficult. In this new scenario, through social isolation, what impacts do graduate students face? How to apply the content and methodology?

Therefore, it is necessary to contextualize the emergence of the pandemic, in relation to Covid-19, which affected Brazilian education, revealing weaknesses in the education system. In this process, unexpectedly, the world was affected. Social isolation, resulting from the Covid-19 pandemic, has had repercussions and impacts on various aspects of life on a global scale in the social, economic, political, cultural, technological and health spheres. In Brazil and around the world, it affected education in the schooling and training process, at all levels of formal education.

Analyzing historically, the impacts caused by pandemics can be devastating. According to the study by Collins (2010), when citing the Spanish flu, reaching victims in the 18th and 19th decades, infecting approximately a third of the entire world population, leading to the death of more than 50 and 100 million lives. Recently, another pandemic has emerged, due to a disease called COVID-19, caused by Sars-Cov-2 (coronavirus). There are several speculations about when, where and how the first case of COVID-19 occurred. Although it is known that exactly on the last day of the Christmas month of 2019, an alert was issued by the World Health Organization (WHO) in China, reporting numerous cases of atypical pneumonia in Wuhan, (WHO 2020).

In Brazil, in February 2020, the epidemic was declared a Public Health Problem of National Importance (GARCIA; DUARTE, 2020). In 2021, the Covid-19 pandemic still presents worrying data, in 2020 the number of deaths only increased with the rise of the epidemiological curve, making it a major challenge for the entire population. In the 21st century, the idea about teacher training gained more space for discussion, although

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This movement is full of new challenges, mainly due to the significant changes associated with society, making it extremely important and necessary to redo a broad reading of the "whole" as well as the human condition. In this way, understand this interconnection between the sociopolitical, cultural, economic and technological dynamics of contemporary society.

For Marcelo; Garcia (1999), training has a direct relationship with the social function of transmitting knowledge, it is the relationship between knowing oneself or knowing how to do, involving the entire context of being, whether political, social or economic. In the case of a degree course, based on the teaching of education in science and/or biology, the concept of teacher training. According to Geraldi (2003), it is seen as a process of achievement, it is about your own trajectory, involving your personal and professional, and can evolve according to being, knowing and doing.

In this way, being a teacher is related to the transmission of continuous knowledge, of great complexity, personality and experiences, without leaving aside ethics, your professional identity, the need to increasingly train and is aligned with cultural diversity.

> In this context, the Biology teacher is responsible for teaching the biological concepts that will form the scientific basis for students to understand the world and be able to act in it critically, and must therefore avoid fearful, suspicious and alienating attitudes. To do this, it is up to you to show your students that knowledge is constructed and that they are part of this process, seeking to integrate them in the search for knowledge, preparing them to face and solve problems and analyze the consequences of science and technology in modern society. (KRASILCHIK, 2011).

According to the Curricular Guidelines for Biological Sciences Courses of the Ministry of Education and Culture (MEC), the areas of activity of the biologist, whether bachelor or graduate, are diverse and enter various areas of the job market, being able to work in front of "socio-environmental problems, whether biological, ecological or human, interpreting the relationships between man, society, nature and science" (BRASIL, 2001). The Pedagogical Project of the Course (PPC) Biological Sciences at the State University of Alagoas, Campus II - Santana do Ipanema (2017) demonstrates the intentions of the university, which seeks to train biologists with the following responsibilities:

> "To train a biologist-teacher capable of understanding social demands, reading the situation in which their professional performance will focus with a critical and knowledgeable look at the socioeconomic, cultural and environmental reality in which they are inserted, from the perspective of sustainability". In specifics:
> - License emancipated professor-biologist capable of building knowledge, skills and abilities that reinforce an ecological-educational praxis, where freedom and ethical values can base a new paradigm of coexistence between men and their environment.

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> • Train teacher-biologists capable of planning and carrying out experiments, discussing results and proposing solutions;
> • Enable understanding about the role of research as an instrument for investigation, construction and reconstruction of knowledge aimed at meeting socio-environmental demands;
> • Strengthen the relationship between technical-scientific knowledge and training capable of boosting the social development of marginalized populations, based on a work proposal that systematically focuses on strategies for the preservation/conservation of natural resources and life in general; (ALAGOAS, 2020).

The insertion of remote teaching has become an alternative to face these new challenges. Bouchard (2000) states that the technologies in use enable levels of dialogue according to their structural characteristics, which interfere with transactional distance and consequently with interactive possibilities. Therefore, through technology, it is possible for there to be interaction between teachers/students, teachers/professors and with this, the possibility of transmitting information, building knowledge.

Technology is discussed a lot, due to its breadth and function, but it is not the savior of education (at least now), although it has three fundamental pillars: Transform, Teach and Learn. It is necessary to meditate and discuss changes in education, the scenario highlights difficulties in teaching classes in synchronous meetings, preparation, organization, planning and in addition to the professional's skills are required. Education calls for help, in some way or another and on the other hand, in times of COVID-19, paradigms are broken and the teacher gains a fundamental perspective on the current pandemic.

The United Nations Educational, Scientific and Cultural Organization (UNESCO), in March 2020, released data of great impact on the educational scenario. At least 85 countries have closed (partially or completely) face-to-face activities in schools in order to contain the spread of the new virus, which causes Covid-19, impacting approximately 800 million students (children and young people). Therefore, investing in and valuing distance learning and teaching was prioritized, involving more than 70 countries to support this cause. (UNESCO, 2020).

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The National Common Curricular Base (BNCC), when presenting the various competencies and skills to be developed with curricular content, highlights the competence of Digital Culture, which aims to:

> understand, use and create digital information and communication technologies in a critical, meaningful, reflective and ethical way in different social practices (including school ones) to communicate, access and disseminate information, produce knowledge, solve problems and exercise protagonism and authorship in life personal and collective (BRASIL, 2020).

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In the publication Technology or Methodology? The great challenge for the 21st century. Revista Pitágoras 2013, by Giani; Peres – Presents this relationship between welcoming innovations, everything related to new things and their technologies into everyday school life, bringing us ever closer to the contemporary world. Nowadays, educators, from their training, need to develop or create practical skills and use new technologies to their advantage. Thus, technology utility devices present a new concept, as they have historically been seen as enemies of education, as they distract students in the classroom. At this time of pandemic, the notebooks of thousands of students have practically become a digital device, they are now seen as allies, as they enable communication and access to information.

1.2 TO REFLECT ON...

First of all, the human being is a life! And lives matter!

At UNEAL, on Campus II - Santana do Ipanema, the academic semester for in-person undergraduate courses since 2020 has been affected by the pandemic. In March 2020, the Government suspended classes in the state network, including Universities. “The state education network will have classes suspended for 15 days starting next Monday (23).” The preventive measure to combat the new coronavirus was announced at a press conference, on Tuesday afternoon (17/03/2020), by governor Renan Filho.

> Classes will be suspended from next Monday so that families can prepare: communicate at their workplace, check who will be with the children, and this organization requires time”, explained Renan Filho. Unfortunately, since this announcement, until the moment I write this study, nothing has returned to normal. (ALAGOAS, 2020)

Thus, the University's academic calendar was readjusted, started in person (in February, before the decree) and was soon interrupted and returned remotely. Those completing the degree course, at the beginning of the pandemic, had their degree completed online. Something impactful, never thought of. Students selected by the Unified Selection System – SISU, to begin their first academic semester at the University, were looking forward to beginning their studies and living within the university environment, consequently, they began to invite and live with the University within their home. “The new coronavirus pandemic can impact mental health and psychological well-being as well.

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due to changes in routines and family relationships." (CLUVER et al. 2020; ORNELL et al. 2020).

Santana do Ipanema is a city in Alagoas and belongs to the 9th Health Region of Alagoas. In the study, Santana do Ipanema had 5,564 confirmed cases of COVID-19 in the 9th RS of Alagoas. When analyzing the number of cases by municipality, Santana do Ipanema, Olho D'Água das Flores and São José da Tapera are the cities with the highest number of cases, with 1,615 (29.0%), 1,024 (18.4%) and 840 (15.1%) (BIRTH JS 2020).

These municipalities, for the most part, are the cities of the students of the Biological Sciences Degree Course. In this way, the possibilities of being or having been infected or living with a family member who tested positive interferes, influencing personal and academic performance. In 2021, the scenario remains unstable. This reflection reflects what millions of individuals are going through in their lives, everything changing, everything adapting to the new normal.

> In general, during pandemics, people's physical health and the fight against pathogenic agents are the primary focuses of attention for managers and health professionals, so the implications on mental health tend to be neglected or underestimated. (ORNELL, SCHUCH, SORDI; KESSLER, 2020).

Studies have suggested that the fear of being infected by a potentially fatal, rapidly spreading virus, whose origins, nature and course are still little known, ends up affecting the psychological well-being of many people (ASMUNDSON; TAYLOR, 2020; Carvalho et al., 2020). Symptoms of depression, anxiety and stress in the face of the pandemic have been identified in the general population (WANG et al., 2020).

This study arises through the question: What difficulties were faced during the Covid-19 pandemic in the process of training undergraduate students in Biological Sciences? In order to understand, its impacts and how to deal with it. At the same time, the absence or precarious teaching of methodologies aimed at remote teaching, due to COVID-19, will interfere with this process. Finally, this article aims to identify the difficulties faced in remote teaching in times of pandemic by students in the final periods of the Degree in Biological Sciences at the State University of Alagoas, Campus II and to understand the interest in post-training.

2 THEORETICAL FOUNDATION

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The teacher, in addition to being an educator and transmitter of knowledge, must act, at the same time, as a mediator. In other words, the teacher must position himself as a bridge between the student and knowledge so that, in this way, the student learns to "think" and question for himself and no longer passively receives information as if it were a deposit from the educator. We realize then, that in relation to education, the teacher assumes the responsibility of acting as a subject in the world and teaching his students the historically accumulated knowledge, giving them the opportunity to also act as protagonists in society.

According to Freire (1979, p. 47), "teaching action is the basis of good educational training and contributes to the construction of a thinking society." However, for this to be possible, the teacher needs to make a true commitment and face the path of learning to teach. Evidently, teaching is a responsibility that needs to be worked on and developed. An educator always needs, every day, to renew their pedagogical approach in order to best serve their students, as it is through commitment and "passion" for the profession and education that the educator can truly assume their role. role and be interested in actually learning how to teach."

Researching and studying learning difficulties is an arduous and often ambiguous and confusing process. The term brings with it a series of attributes that end up expanding its field of definition. Thus, it is observed that the definition of learning difficulties may vary from country to country and from author to author. (SARAVELI, 2005).

Many of those who have learning difficulties are wrongly classified as having low intelligence, insolence or laziness and are requested by adults (teachers and parents) who are generally anxious and concerned about their performance, which in itself can worsen the problem (SMITH ; STRICK, 2001).

In times of debate about university reform, it is important to consider that true democratic education is one that not only guarantees access, but above all the student's retention, focusing on comprehensive training and not just professional preparation. Therefore, when this student arrives at a higher institution and is unable to take advantage of the teaching that it and its masters promote, follow their readings and exercises, develop skills, learn to access knowledge, education is far from reaching its democratic ideal. (SARAVELI, 2005). Libâneo (2006), presents a proposal for initial and continued training of teachers that are focused on the newest conceptions of the teaching process and

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learning. However, it contrasts with the current tendencies of education systems to train teachers, offer “practical” courses, and pass on “packages” of new theories and methodologies that are distant from the knowledge and experience of teachers. For Libâneo (2006), rethinking initial and continuing teacher training involves:

> search for answers to the challenges arising from the new relationships between society and education, based on a critical reference of teaching quality. This involves taking into account the new paradigms of production and knowledge, subordinating them to an emancipatory conception of teaching quality; b) a conception of critical-reflective teacher training, within the understanding that practice is the reference of theory, theory the nutrient of better quality practice; c) use of action research as one of the methodological approaches guiding research; d) adoption of the socio-interactionist perspective of the teaching and learning process;
> e) professional skills and abilities in new conditions and working modalities, going beyond their classroom responsibilities, as a member of a team that works together, discussing in the group their conceptions, practices and experiences, having the pedagogical project as a guiding element .(LIBÂNEO, 2006 p. 88-89).

> The National Curricular Parameters highlight that "Mastering biological knowledge to understand contemporary debates and participate in them" constitutes just one of the purposes of studying Biology as a science, at school. According to this document, biological sciences bring together some of the answers to the questions that have been formulated by human beings, throughout their history, to understand the origin, reproduction, evolution of life and human life in all its diversity of organization and interaction. They also represent a way of facing practical issues that humanity has always faced, aiming to maintain its own existence and which concern health and food production, just to give an example. We must understand, however, that biology is a complex area, and that it presents situations that constitute the reality of the life of each human being, which makes the role of Biological Education fundamental in the formation of responsible citizenship. (PEDROSA, 2004).

Thus, digital technology is used as an alternative to fill the gaps left by the impossibility of holding face-to-face classes, that is, education can be mediated by multimedia resources and remote teaching constitutes a possibility for teaching and learning. Blikstein (2020), presents remote teaching as an alternative to mitigate the effects of the Coronavirus pandemic on education, following the example of what has been done in several countries around the world.

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> School knowledge of biology allows the understanding of living beings to be expanded, contributing to the perception of the uniqueness of human life in relation to other organisms, due to its incomparable capacity for intervention in the environment. The fact that life is the central theme in biological education makes it a privileged resource for tackling many human issues, including environmental ones, helping to raise awareness among future generations and contributing to overcoming these problems and achieving a better world for all. Thus, learning about biological phenomena, living beings, the body and sexuality, health and the uses, by society, of scientific products and technological resources should allow the development of specific capabilities to understand the evolutionary history of living beings, characterize the diversity of life on the planet, recognize situations of environmental imbalance, evaluate the effectiveness of intervention methods,

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> recognize the importance of conserving the environment. They also expand their ability to value caring for their own body, to understand that good housing, sanitation, work, transport, leisure and food conditions are essential for the well-being of us all.(PEDROSA, 2014).
> Biological concepts are, admittedly, sources of many of the difficulties presented by students, which should serve as an incentive for teachers to seek new ways of organizing and approaching content, so that it is adapted to the interests and capabilities of learners. As some of these difficulties occur due to the deficiencies that the teachers themselves have in working with the content, resulting in students' poor understanding, using potentially interesting materials results in a greater contribution to the students' meaningful learning and the reduction of existing learning difficulties. Other factors noted are the inadequacy of the teacher's explanation of some concepts; the short time for exposing concepts; the teacher's difficulty in answering students' questions; the lack of discussion about certain aspects considered important to anchor new knowledge; the large number of new terms that students need to learn and the lack of practical or experimental activities to help expose the content, among other factors. (PEDROSA, 2014).

3 METHODS

A qualitative and quantitative study, this type of research aims to understand certain behavioral “phenomena” through the collection of narrative data and studying each person’s individual preferences.

> Answers very particular questions. It is concerned, in the social sciences, with a level of reality that cannot be quantified. In other words, it works with the universe of meanings, motives, aspirations, beliefs, values and attitudes, which corresponds to a deeper space of reactions, processes and phenomena that cannot be reduced to the operationalization of variables (MINAYO, 2001 , p.21).

3.1 RESEARCH PARTICIPANTS

The undergraduates of the Biological Sciences Degree course of the final semesters/years (8th p. and 6th p.) of the State University of Alagoas-UNEAL, Campus II, took part in this research. Male and female, preserving their identity. The reports were identified by the letter “A” (related to a student) and a number in ascending order. Example, A1, A2, A3.

3.2 DATA COLLECTION

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A semi-structured questionnaire was carried out in a single stage, using the instrument for data collection, applied virtually, considering the pandemic moment, using the *Google forms* for this purpose.

3.3 QUESTIONNAIRE

According to Fiorentini and Lorenzato (2007), the questionnaire is one of the most traditional data collection instruments, in which questions can be open, closed or mixed. The questionnaire was designed using the survey administration application, *Google Forms* which is included in the office package *Google Drive*, together with *Google Docs*, O *Google Sheets* and the *Google Slides*. O *Google Forms* features all the collaboration and sharing features found in documents, spreadsheets, and presentations.

Thus, the study reflects on our current reality, of social isolation and pandemic, as well as the need to use digital technologies in order to continue the educational process. For this reason, it proposed to investigate the difficulties arising from remote teaching, through educational technologies, in order to better understand the reality of higher education students, future teachers, and how it is for these students to adapt to the learning culture. through digital means. After preparing the questions, the questionnaire was sent via the WhatsApp application, which is a multiplatform instant messaging and voice calling application for smartphones, for students to respond.

4 RESULTS AND DISCUSSIONS

44 graduates responded to the survey, 36.4% male and 63.6% female, according to the table below, they differ between periods, with 54.4% in the 6th period and 45.5% in the 8th period.

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TABLE 01 –Characterization of study participants.

Variables	N	%
Sex		
Masculine	16	36.4
Feminine	28	63.6

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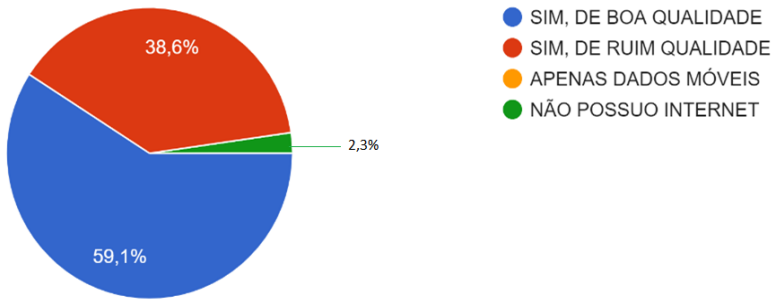
Age		
18 to 23 years old	24	54.5
24 to 29 years old	16	36.4
30 to 35 years old	two	4.5
36 years +	two	4.5
Period		
6th period	24	54.4
8th period	20	45.5

Source: Authors 2021.

When asked about the availability of internet in their homes, 59.1% said they had it and that it was of good quality. However, more than 38% despite having internet access in their homes is of poor quality. Also, 2.3% do not have internet at home and no students use mobile data. Médici (2020), when researching internet availability, only 39 students (38.6%) claim to have access to good quality internet in their homes. Another 41 students (40.6%) said they have internet access, but that the quality is regular. There were 10 students (18.8%) who said they had access, but of poor quality and another 02 public school students (2%) said they did not have internet at home.

FIGURE 1–Internet availability for students at home.



Source: Authors 2021.

Related to remote education, when asked about its evaluation, the highest percentage, with approximately 66%, said it was regular education. Next, 20.5% said the quality of teaching was good, 11.4% considered it terrible or bad and 2.3% rated it as excellent. The result is very different when compared to an institution

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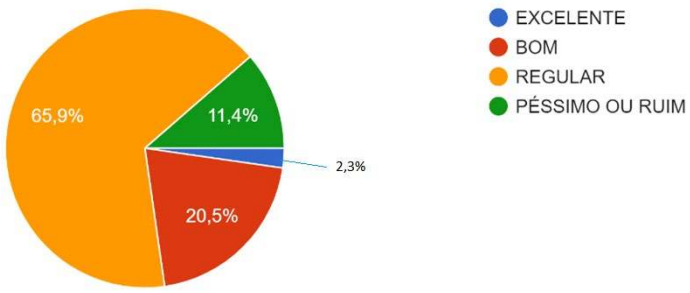
private, the vast majority of students (61.5%) consider the quality of the education they are receiving during this period to be good, Médici (2020).

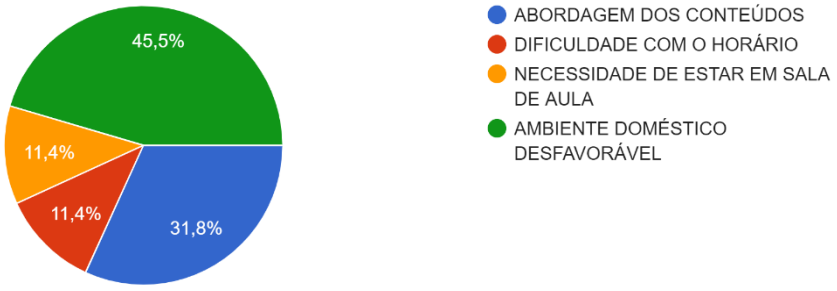
FIGURE 2–Assessment of the quality of remote teaching during the Covid-19 pandemic from the students' perspective.



Source: Authors 2021.

Regarding the greatest difficulty faced in remote teaching, the answers differ, although 45.5% point out that the home environment is detrimental to learning. Next, approximately 32% highlighted the approach to content and 11.4% were divided between difficulty with the schedule and the need to be in the classroom. Médici (2020) looked at the difficulties encountered in remote teaching, the greatest difficulty was with understanding the content, as 40 of them (39.6%) considered it confusing, followed by the need for interaction in the classroom (29 students corresponding to 28 .7%).

FIGURE 3–Students' difficulties during remote teaching.



Source: Authors 2021.

It was also asked whether remote teaching brought any ease or advantage and 61.4% agree about organizing their own study time, 25% say they start a subject, stop and then return, 13.6% prioritize what to study first and no percentage to study only what they want. Médici (2020), when questioning remote education students about the positive points of distance learning, the highest percentage was in organizing the

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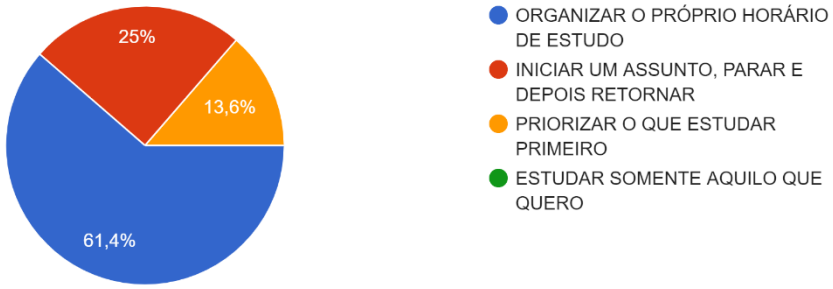
own study time (32%), followed by the home environment, which they consider to be more comfortable studying (25%).

FIGURE 4–Ease or advantage provided by remote teaching according to the perceptions of students students.Alagoas.



Source: Authors 2021.

Related to the evaluation of the remote education they are receiving, the opinion of the interviewees was divided, with a higher percentage of 34.1% believing that the school space is still more efficient for learning, 27.3% considering that it is possible to evolve in distance learning technologies. 20.5% say that teaching has many flaws in its methodological structures and 18.2% still consider the teacher important in the teaching-learning process.

Hodges (2020) in the study, Differences between Online Learning and Emergency Remote Teaching, comments, planning, preparing and developing a fully online university course usually takes six to nine months before delivery. Most educators feel more comfortable teaching online in the second or third cycle. It is impossible for all faculty members to become experts in online teaching and learning overnight in the current situation, where delivery times vary from a few weeks to a single day.

FIGURE 5-Students' perception regarding the evaluation of the institution's remote teaching.



Source: Authors 2021.

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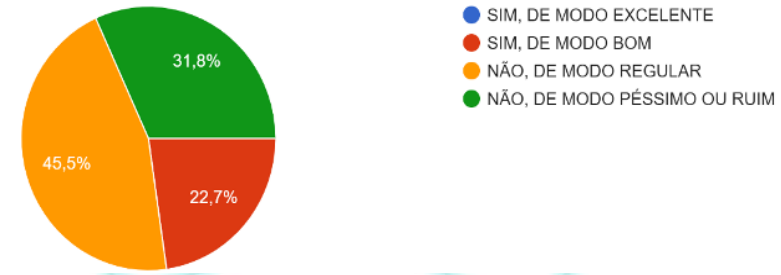
Finally, it was asked whether the university was prepared for remote teaching. More than 45% said no, on a regular basis. 31.8% said no, in a terrible or bad way, 22.7% said yes, in a good way. Yes, excellently with no manifestations. Although the University has organized itself, according to a proposed resolution for the special emergency semester. Alagoas, (2020) highlighting the importance of institutions meeting student demands, with a view to maintaining social distancing measures. Almeida and Prado (2003), which highlights the importance of using technology for education, as long as it connects teachers and students in the network, interconnected, so that together it is possible to manage the training itinerary.

However, according to the responses obtained, a degree of dissatisfaction among trainees can be seen. Therefore, it is observed that the remote teaching method is not fully accepted and flaws are pointed out by students. Here, Demo (2009) corroborates when publishing about technology, while at the same time it helps education, we cannot give up on "learning well", so it is necessary to prioritize classes for synchronous meetings.

FIGURE 6-Students' perception regarding whether or not the university is prepared to teach remotely.



Source: Authors 2021.

As for the discursive questions, the first was about the challenges/difficulties found during the remote teaching period and the reports were diverse. To better understand, they were divided into categories as shown in table 1.

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TABLE 1-The challenges that remote teaching offers in the final stretch of undergraduate student training in Biological Sciences.

CHALLENGES	REPORTS
ABSENCE OF PRACTICAL CLASS	13
METHODOLOGICAL APPROACH	09
TECHNOLOGICAL RESOURCE/CONNECTION	07
ABSENCE FROM THE CLASSROOM AND/OR TEACHER PERSONALLY	06
UNFAVORABLE HOME ENVIRONMENT	05
EMOTIONAL HEALTH/FOCUS	04
TOTAL REPORTS: 44	

Source: Authors 2021.

Practical activities are undoubtedly highly sought after, whatever the course. Due to the pandemic, internships were unable to take place in person (for at least a certain period of time), which was widely reported as follows:

A01:*"Several challenges, mainly the lack of practical methodology."* A02:*"Practical experimentation is essential both in the classroom, laboratory and interpersonal experiences with multidisciplinary and training events. This way, this space in the academic-professional construction remains idle."*

A07:" *In the current context of completing the course, the main challenge is related with internships since practical experience and face-to-face experience are undoubtedly essential and important for our preparation as professionals."*

A16:" *A lot, mainly because it's the final period and we needed to do the internships that They are mandatory and fundamental to our training. But due to this lack of contact with the classroom itself, we will have a big gap in our training."*

A19*: "* *The issue of practical classes such as internships and classroom contact itself, especially interactions between classmates."*

Another frequently reported category refers to the approach to teaching content remote.

A32*: "* *I consider the lack of preparation of some teachers and areas to be a challenge. of tools and methodologies for remote teaching, so as not to become so exhausting for the student."*

A24:*"Some teachers teach very long classes and no matter how much they say it is not It is mandatory to stay until the end, they explain important issues that will be evaluated. Some Teachers ask us to hand in work well before the class deadline and this leaves us extremely overworked."*

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A07:*"There is not good learning, teachers give a lot of content to read, Since we have other subjects, I don't feel adapted to remote teaching."*

Remote teaching is completely linked to connectivity, virtual meetings, connection and the internet. Although, at times, these allies "disappear", check out who has gone through or is still going through this experience.

A42:*" Scarce resources for access to good quality internet and equipment technological compatible with applications It is others means in EAD."*

A08:*" Connection problems that affect participation/interaction in classes, remain spend a lot of time on the laptop, requires more concentration..."*

A18:*"Not being able to continue due to issues such as lack of computer or internet"*

A35:*"Despite all the efforts of teachers and students, some things do not depend on us, such as: the internet. Which is one of the biggest obstacles. Not everyone has access to the tools, and this affects learning."*

The teacher is in fact fundamental in the student's educational trajectory. Your absence may limit you as a student, as well as the educational space. Even though home is the school and university of thousands of students in recent times, it is still not a suitable place for the teaching-learning process, which can contribute to low productivity, lack of focus and mental health problems, as in the following reports .

A01*: "The absence of a teacher in person... does not always resolve doubts"*

A22:*"The challenges are diverse, since you often cannot understand all the topics covered by the teacher and thus there is a bit of a gap in learning. Something that if it were in person could have more meaningful learning."*

A44*: " Adapting to remote teaching, as well as the environment that is not always favorable for studying."*

A19:*" The challenges faced are numerous, such as: an unsuitable environment for studying, a barely functional digital platform, and how teaching is in a home environment It generates a bit of complacency and the enjoyment of activities regresses."*

A03:*"... Another negative point that I perceive involves the mental health of students, with the accumulation of subjects and the procrastination of being at home, making learning difficult."*

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A08:" *Numerous challenges, such as: dealing with studies and emotional situations in the time; Prospects for improving teaching conditions for virtual learning; to maintain the focus..."*

Completing an academic degree is not always the end. When questioning their desire to teach, and whether they would consider remote teaching, 68% confirmed their interest, then 14% had no interest, some of the graduates (11%) still had doubts about continuing teaching while others (5%) had interest in teaching, but only in face-to-face teaching, and finally, 01 student already works as a teacher also considering remote teaching, as shown in table 03. Araujo (2007), in his study, when investigating interest in biology course graduates, in teaching presented 42.1% acceptance. Cury (1996) also highlights the role of the teacher, often lost in training, who, in addition to being a demystifier of knowledge, has an important role as an opinion former and, above all, as a social transformer. See table 02.

TABLE 02-Students' intention to teach, considering remote teaching.

ANSWERS	N	%
Yes	30	68
No	06	14
Perhaps	05	11
I already teach	01	02
Yes, but only in person.	02	05

Source: Authors 2021.

From a continuing education perspective, when asking what the interest is between specialization, master's or doctorate, approximately 30% of the trainees intend to do a master's degree, just as the interest in specialization (16%) is very present, combining specialization and master's (7%) how much studying a master's degree and doctorate (9%) is present in the participants' interest. However, 20% still do not know how to answer what to do next and 5% have no interest in continuing, others (14%) are interested in training, but did not specify between specialization, master's degree and doctorate. Table 03.

TABLE 03-Interest in continued training of graduates in Biological Sciences, at the University State of Alagoas, campus II.

INTEREST IN CONTINUING TRAINING	N	%
MASTER'S DEGREE	13	29
SPECIALIZATION	07	16
SPECIALTY AND MASTERS	03	07
MASTERS AND DOCTORATE	04	09
IN DOUBT	09	20

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INTEREST WITHOUT SPECIFYING AREA	06	14
NOT INTERESTED	02	05

Source: Authors 2021.

The areas of interest of those involved are divided between Education, Ethnobiology, Health, Environment and Zoology, as shown in table 02. Corroborating with Teixeira (2001) who reinforces the need for teacher training not just to obtain the title, as being Educating is a long-term process, of constant updating, it is a complex process that requires a lot of knowledge and skills that are acquired throughout the development and updating of teaching practice. Araújo (2007) comments on the areas of activity of biologist, bachelor's and graduate students covering a relatively diverse market, tending to increase gradually with the advancement of natural and technological sciences.

TABLE 02-Areas of activity of interest to graduates who intend to pursue continued training in Biological Sciences.

	AREAS OF EXPERTISE
EDUCATION	Teaching Science and/or Biology; Active methodologies.
ETHNOBIOLOGY	Ethnobotany; Ethnoecology.
HEALTH	Clinical analysis; Cellular and molecular biology; Parasitology; Genetics.
ENVIRONMENT	Ecology; Conservation of fauna and natural resources; Environmental education.
ZOOLOGY	Entomology; Ethology.

Source: Authors 2021.

FINAL CONSIDERATIONS

The present study shows that the moment still requires preventive measures to prevent the spread of the coronavirus, in order to contain the spread of the pandemic, which is why society as a whole has been asked to rethink its way of life and its relationships.

The difficulties faced by graduates are related to the lack of practice, methodological approach, as well as technological resources and regardless of socioeconomic conditions, the family environment is not always ideal for remote learning, (which may affect the emotional state of these students), as the university in si is highlighted as the environment conducive to education, along with the presence of the teacher.

For future teachers and biologists, the vast majority are eager to teach, as well as continue in the academic field, whether in the master's degree, doctorate or specialization, working in different areas, whether Education (most of them) Ethnobiology, Health, Environment or Zoology. However, there is a minority of students with no intention of teaching or continuing post-training, so the University was considered unprepared for the start of remote teaching.

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