Distance Higher Education Paradigm in Brazil

Dario da Silva Monte Nero

Abstract — The technological advance has favored the increase in the number of distance education - DE courses throughout Brazil, facilitating access to higher education in an increasingly computerized and diversified way. The objective of this study is to contextualize how Distance Higher Education - DHE in Brazil has been produced. This is a critical essay based on a bibliographic review and official data provided by the National Institute of Educational Studies and Research Anísio Teixeira - INEP. In the period between 2008 and 2018 the number of DHE undergraduate enrollments increased 196%, while in the face-to-face mode the growth was only 10%, in 2018 when the number of graduates of DHE undergraduate courses was analyzed, even with 40% of the total courses registered, it was observed that only 21.7% were among the graduates, while in the face-to-face system it was 78.3%. In the National Student Performance Exam, in the same year the DHE courses had a balanced performance in relation to the in-person courses, being that 6% of the courses had the maximum score in the exam, while the in-person courses were 5.8% and when analyzed the worst results the average of the DHE courses was 3.7%, while the in-person courses had 3.6%. Nevertheless, DHE has been increasing its collaboration in the expansion of the democratization of education and in the conquest of the most diverse academic contents, however, it is necessary to have a careful analysis about the quality of this teaching method.

Keywords: Education, Distance Education, Higher Education, Graduation, Technology

I. INTRODUCTION

Education in Brazil is going through a period of great transformations because the advance of digital information processing is favoring the growth of the quantity of online courses, which goes from recycling courses to postgraduate courses throughout the country. Thus, due to this rapid and significant increase in computerization and use of digital resources in the educational field, teaching has been shaped to DHE standards, which can provide an alternative for social inclusion, despite doubts about its effectiveness in quality, even being supported by the law and inspected by competent agencies [10].

The Law of Guidelines and Bases of Education-LDB of 1996, shows the difference between the principles of DE, in which it favors the offer of courses in many categories and at various levels [5]. Until then, the courses were held infrequently and applied more in their supplementary character as TV or telecourse courses and only the University of Brasilia had been offering some courses in both extension and correspondence specialization [20].

As a result, DHE has been consolidated since 2000 with the Open University of Brazil - OUB, an entity that favored the dissemination of DHE and consequently expanded the number of undergraduate courses throughout the country, providing access to students due to important characteristics such as: low cost, geographical positioning, and time flexibility for working students [6].

Although the DE modality has such a capacity to mold itself to the market system, based on the necessity of the mode of production that society is inserted in. [30], it should not be perceived as a substitute for face-to-face education, but as a way of conducting the same education process in a way that enhances academic skills.

Since of this, while technology brings possibilities of information mediation, it also adds complexity to the process, in that there are difficulties to be overcome for an optimal use of the media in the process of knowledge construction, because the characteristics of technology require methodological concepts, linked to educational policies, computerization and different traditional concepts [28].

However, various resources can be adopted to promote interactions, providing exchanges between individuals, as well as the formation of collaborative groups, where participants can express thoughts, dialogue, exchange information and experiences, through the Virtual Learning Environment - VLE, making it an instrument that allows socio-cognitive exchanges between teachers and students, providing interaction tools [33].

According to [16] Distance Education – DE seems to be translated into a breaking down of the barriers of space and time, allowing people to access this mode of teaching, where information and education technology is one of the main mediators of teaching learning.

In the last decades DHE has shown a very expressive numerical evolution in the number of undergraduate enrollments [14]. However, it is important to analyze whether this growth has provided a good level of quality in education and whether the expansion of digital education was enough to break down barriers that were already encountered in face-to-face education.

Thus, this work aims to conduct a study on how DHE in Brazil is being produced and what are the barriers faced in this new technological context.

Thus, discussing the advances and challenges of this educational system can bring us a critical understanding of DHE in Brazil and its possible gaps, deepening the understanding of this teaching structure.

This is, therefore, a bibliographic review, with analysis of official data provided by the Anísio Teixeira National Institute for Educational Studies and Research - INEP, a federal agency linked to the Ministry of Education - MEC, which involves the generation of information that subsidizes the formulation, monitoring, and evaluation of public policies focused on education, making it an important element in the development of studies and research on the educational sector.

II. BRIEF HISTORY OF DISTANCE EDUCATION IN BRAZIL

The development of DE in Brazil began in the 20th century, more precisely in 1904, when an advertisement was found in the Journal do Brazil, on the classifieds part, offering a correspondence typing course [19]. From then on, DE appears as an alternative for the process of

Received February 5, 2021, Accepted March 11, 2021, Publish online June 4, 2021.

Dario, S. M. N. Member of the Coordination for the Improvement of Higher Level Personnel - CAPES and PhD Student of the Graduate Program in Food Nutrition and Health at the Federal University of Bahia, Brazil, (e-mail: dariomontenero@yahoo.com.br).

This work is under Creative Commons CC-BY-NC 3.0 license. For more information, see https://creativecommons.org/licenses/by-nc-nd/3.0/.
training workers, through radio equipment, especially those who were unable to attend courses in person due to an irreconcilable location.

In this way, the context of DE in Brazil demonstrates that it has always had a connection with professional training, enabling the "workforce" to undertake certain activities or to master certain skills, motivated by issues inherent to the market system. Public policies aimed at education began to visualize from 1930 onwards the potential that DE had to reach people from various social classes, especially the less favored, without allowing for great reflections on egalitarian issues [9, 10].

With the establishment of the Estado Novo in 1937, the intention was to train workers so that they could serve a slice of the market that needed administrative modernization, so following this idea of training, the Technical Radio Institute was created in 1939 and three years later, the Brazilian Universal Institute [12].

In the following decades, modernization was achieved through the television system, replacing the radio experiences in 1950, allowing for "television education" as early as 1960, which in the following years favored the training of teachers by the Brazilian Association of Television-ABT and MEC through seminars [41].

Despite the creation of the Law of Directives and Bases-LDB in 1961, endowed with several characteristics in favor of education, it was only in 1971, through the approval of a new version of the law, that DE was inserted, through art.25, which authorized technology as a possible educational tool [16].

This inclusion was directly related to the arrival of technological resources of information, more precisely in 1970, where such advances allowed a greater interaction between teacher and student, giving more agility to the process [39].

However, the affirmation of DE in Brazil occurred in 1996, through its regulation, after the creation of the Secretariat of Distance Education-SEED in 1995, this entity was linked to the MEC and articulated with LDB, so this process favored the implementation of several courses at various levels of education through (Law 9,394, 1996), this made DE be a teaching modality as any other, becoming included in public educational policies [19].

During this same period, the National Center for Distance Education was created, where it was formulated by the Department of Education, in which its guidelines remain up to the present day, always involving the strengthening of DE through better infrastructure and regulation [19].

Thus, the idea of the education system was to encourage the expansion of the DE for DHE, through the public power and this was also given by the regulation of art. 80 through Decree No. 2. 494, of February 10, 1998, this law according to [10] brought a confusion in the way in which DHE was being linked, in which it claimed a concept that DE was the solution to educational problems present in society.

Because the way in which DHE was being treated would favor an offer of numerous undergraduate courses and low costs, since it would not need a large staff of teachers and large physical structures, where the virtual rooms would embrace a much larger number of students.

In 2005 the decree of No 5622, [13] was published in the official gazette. According to [33] it sought to constitute a quality education through DHE based on the registration of teaching, supervision, monitoring and evaluation institutions, harmonized with quality standards enunciated by the Ministry of Education - MEC. In this context, [16] affirm that the DHE demonstrates that it would be in a process of overcoming the difficulties encountered in educational policy, in which it would facilitate the access of students to this modality of education.

Thus, in the process of building and strengthening the DHE, the government instituted in 2006, by Decree 5,800, the UAB system, an organ that was created in 2005 with the objective of expanding digital higher education in the country and with the intention of disseminating the offer of courses and programs of higher education throughout the national territory [3,5].

In addition to promoting the implementation of DHE in public institutions, the OUB supports research into innovative teaching methodologies supported by Information and Communication Technologies-TIC [19], operating through the support of Polos de Apoio Presencial-PAPs, which are distributed in municipalities and micro-regions without undergraduate courses [3].

III. ADVANCEMENT OF DISTANCE EDUCATION IN BRAZIL

However, this expansion of digital education for [10], emerges as an alternative public policy, aiming to promote an accelerated increase in the number of students enrolled in higher education, because physical and structural barriers would be minimized in the face of this innovation and politically this would be an important point, which would use DHE as a democratic alternative for educational inclusion, through technology.

Since this type of teaching exposes advantages in its application, both for its low cost and for its great possibility of expanding territorially, besides favoring to the student the possibility of aggregating other activities associated to social necessity such as work and home administration.

In the last ten years, between 2008 and 2018, DHE showed a very expressive numerical evolution in the number of undergraduate enrollments, with an approximate increase of 196%, going from 463,093 and reaching a total of 1,373,321 enrollments, while in the same period, in the face-to-face mode there was an approximate increase of 10%, representing 1,873,806 and reaching the mark of 2,072,614 [14].

These data reinforce the idea of the exponential explosion of digital education and perhaps the scrapping or lack of incentive of public education policies with the traditional graduation itself, since according to data from [14], between the years 2017 and 2018 we had inverse advances between these modalities of education, where the DHE came out of 1. 756,982 reaching a total of 2,056,511 registrations, with an increase of approximately 17%, while in face-to-face education we had a drop of -2% from 6,529,681 to 6,394,244.

In the last ten years, between 2008 and 2018, DHE showed a very expressive numerical evolution in the number of undergraduate enrollments, with an approximate increase of 196%, going from 463,093 and reaching a total of 1,373,321 enrollments, while in the same period, in the face-to-face mode there was an approximate increase of 10%, representing 1,873,806 and reaching the mark of 2,072,614 [14].

These data reinforce the idea of the exponential explosion of digital education and perhaps the scrapping or lack of incentive of public education policies with the traditional graduation itself, since according to data from [14], between the years 2017 and 2018 we had inverse advances between these modalities of education, where the DHE came out of 1. 756,982 reaching a total of 2,056,511 registrations, with an increase of approximately 17%, while in face-to-face education we had a drop of -2% from 6,529,681 to 6,394,244.

Based on these data it can be affirmed that this century is being marked by the new communication and information technologies that are reconfiguring our societies under the most different aspects: economic, social, political, and cultural.

Thus, a relevant cause to be studied among these aspects is related
to the character of change in this new era, it would be in the question of identity, in the process of change known as "globalization" and its impact on the formation of the subject and education [2].

For [17], technological systems are as producers of new languages, new information and new concepts, presenting to the post-modern society a man-machine relationship. This is a situation that is displayed by the technological system of communication, unlike the other machines that are at the service of man, they are more than performing tasks, they are transformers of opinion and transmit values of formation and ideology. Forming institutions that participate and interfere in the dynamics of human relations.

Thus, the DE is seen as a great opportunity for the expansion of the DHE, because the viability of the degree courses serves to show their increasing supply in a surprising way [23].

Due to the circumstances of the DHE implementation, it is possible to have in a short period a record number of openings in the national scene. It can also be embraced by a large part of the population, especially by those who live in regions farther away from large urban centers and have difficulty in reconciling study and work [27, 23].

However, this type of education is still seen by many students as an accelerated and easy way to obtain a higher education diploma, in which they will be able to "calmly" acquire such certification and present themselves to the market, even if without having placed confidence and greater efforts to acquire new knowledge and a critical view of the world, from the information provided in the course [25].

IV. QUALITY OF EDUCATION

The meaning of educational quality is contained in the extension of many factors, ranging from the accumulation of knowledge throughout history to economic and especially social aspects. According to [24], educational quality is associated with the link, demands and actions of society of a given historical process and that in order to achieve excellence in education one must build actions aimed at overcoming the socioeconomic and cultural disparity present in the regions.

Therefore, the use of the word quality in education is still a challenge since it involves a multiplicity of factors and can be understood in different ways. Thus, defining or evaluating the quality of an institution's teaching is something complex that involves a delicate interpretation since, according to [39], quality can be associated with the possibility of mastering content, technical capacity, critical spirit, or even the efficiency, effectiveness, effectiveness, and relevance of the educational sector. In this sense, the process of defining or evaluating the quality of an educational institution must be participative and involve the whole community, for [36] who determines the quality of education in the country is the MEC; which regulates, guides, and legislates about its application.

Consequently, this body published in August 2017, with the objective of establishing quality indicators for the DHE, the points that determine the category in DHE, based on principles, criteria and guidelines, which are: To guide students, teachers, technicians and managers of higher education institutions, this to evaluate existing courses or even the opening of new DHE degrees in Brazil [21].

Although these quality indicators are references, for the agencies to direct legal actions to the specific processes of evaluation, regulation, and supervision of the DHE, they do not have the force of law. Thus, the quality of a distance learning and postgraduate program is generally evaluated by the structure of the institution, by the students, by the degree of teacher training, by the didactic material, by the technological structure, by the support services [6].

Within this context, the National Commission for Higher Education Evaluation-CONAES coordinates the evaluation system and the National Institute for Educational Studies and Research Anisio Teixeira - INEP operates the process, through the National System for Higher Education Evaluation-SINAES, which aims to verify the quality of scholars as to the contribution of undergraduate education [4]. Therefore, the evaluation of the quality of higher education is made up of three indicators: National Student Performance Exam (ENADE), the Preliminary Course Concept (CPC) and the Course Concept (CC), these procedures seek to identify what the level of quality of education is through the evaluation of student performance, training of teaching staff, pedagogical project, and infrastructure [28].

Within the instruments, ENADE is the most important indicator, because in addition to gauging skills focused on the mastery of academic information, it informs the quality of the student to the market [9]. So far, the only artifice capable of identifying the level of training of undergraduate students.

However, the result of this process depends on the sovereignty of the commitment of all students involved and this weakens the exam; while some students receive incentives to take it, others due to some dissatisfaction promote the boycott, if absent or even delivering the test blank [42].

In addition to the suspected fraud situations [37], where colleges are accused of accelerating the graduation of students considered less qualified and anticipate those who have a better performance, to have good grades and consequently a supremacy in the educational market.

In this way, all the governmental effort to try to quickly increase the number of access to DHE, through the debureaucratization of the Institutes of Higher Education-IES, may bring some failures in the qualification and/or student learning, even considering positive numbers from ENADE, which may not be a consistent parameter with the academic reality.

Despite this, the system still relies on numbers to perform analysis and demonstrate questionable results.

Thus, in 2018 the INEP published ENADE results showing that the in-person courses had an average of 6% of the courses with the maximum grade, and the attendance courses reached an average of 5.8%, showing an evolution in relation to the same exam taken in 2017, in which the DHE graduations obtained an average of 2.4% of their courses with the maximum grade, while the in-person courses reached 6.1% [14, 15].

It is worth noting that the areas evaluated were different for both years; 2017 were evaluated 34 courses including undergraduate degrees such as: pedagogy, history, geography lyrics and music, bachelors in the areas of Environmental Engineering; Civil Engineering; Food Engineering and Computer Engineering and Technologists in the areas of System Analysis and Development; Industrial Production Management; Computer Networks; Information Technology Management [14].

While 28 areas were evaluated in 2018, among them are the bachelor's degrees in Psychology, Journalism, Administration, Law and International Relations, in addition to the courses that confer a technologist's degree in the areas of Technology in Marketing, Technology in Interior Design, Technology in Graphic Design, Technology in Gastronomy and Technology in Commercial Management [15].

Another interesting data is about the worst grades, where the average of the DHE courses stood out over the face-to-face courses, reaching 6.3% in the year 2017 while the face-to-face colleges reached the mark of 4.9% and in 2018 the DHE courses within the worst grades had 3.7% of the courses while the face-to-face courses had 3.6%
[14,15]. Such data can be challenged due to the disproportionality of the institutions evaluated, as these figures refer to the average of the grades of the chosen courses and there is a difference in the number of colleges, in which the in-person institutions had a greater predominance in the act of evaluation, as well as there is a public and private administrative discrepance over DE.

This statement is even more striking when the [14], discloses the great difference over the administrative category, public and private within DE, because the absolute dominance of private institutions is notorious in the period of 2017 adding 90.6% of students enrolled, leaving 9.4% of public DHE teaching in charge, affirming the market sovereignty over the expansion of education. With this, the needs of the market system to have a skilled labor force with a level of training, favors the dissemination of DHE and facilitates its acceptance, since future graduates will not suffer prejudice due to the lack of a diploma and will thus meet society's demand for continuing education [34].

The computerized system is becoming more and more present in the contemporary world and this can have a significant influence on people's lives, since these technologies broaden the world view, transform communications, and change behaviors bringing new ethical standards, new conceptions of reality, in which it puts the higher education system in a condition to review its role in the processes of subject formation [17].

The conception of a quality education has been embraced in different organizations, with the sense of incorporating in people and in the social organization itself a posture of continuous improvement. Based on this concept, it is necessary to reflect on DE, since there is still not enough scientific data to prove its quality in relation to face-to-face education. Since DHE has its deficiencies and still needs elements that can control, measure, and evaluate indicators related to the quality of courses and knowledge acquired by undergraduate students [38].

For [20] the learning and development of students are goals that diverge between distance and in-person courses. Perhaps didactic changes are needed in the constitution of DHE teaching, through technology and organizational factors of learning, for a potential development of student exercise.

There is a tendency for communication, through the digital process, to provide changes in the teaching system by changing the traditional classroom teaching, not to mention its rapid implementation process [21].

Emphasizes the need for student participation in learning gain, where any information to be passed on to the student will be a stimulus, highlighting the importance of rapid feedback to students, a key aspect in the teaching communication process in DE courses, as well as the relevance of teaching materials and their applicability, and a two-way communication with the student, for the success of DHE [21].

But if there is no adequate guidance on the quality and recognition of the institutions that provide virtual education, it will have difficulties to be characterized as a democratic mode of learning, even taking into account the whole process that involves it due to its possibilities of breaking physical barriers and its easy access to population [10].

And a more critical analysis of the evaluation process, so that it becomes more than a universal and procedural requirement, so that in fact there is more profound data on the educational progress of these students, breaking with this prejudice about the digital teaching method.

V. DEMOCRATIZATION OF HIGHER EDUCATION

University life is a process of complexity that is still out of the reach of many students, as such a journey requires adaptations that range from displacement to a readjustment of the organization of time to deal with the new activities of academic life, so these adaptations go through a multifaceted process that establishes to the student the obligation of change. Therefore, the lack of options can become a major obstacle to student progress, which makes the phenomenon of evasion a very worrying issue for educational public policies [35].

Thus, one of the ways to promote the democratization of higher education is to encourage the expansion of DHE; it allows students to maintain themselves at a lower cost and also with less availability of time, since the use of technology allows those students who live in more distant places to overcome such geographical position [1]. This approach of the student, with the studies, through computerization, may in the future make the evasion rate decrease considerably, but it is necessary to pay attention to other variables that may make the maintenance of the student in the institutions unfeasible.

Despite the great representativeness of DHE courses in Brazil, which was 40% of the total number of courses registered in 2018, when compared with the number of graduates in the same period, there is a gap; only 21.7% of the students enrolled in DHE education were able to complete [15].

And in face-to-face education there was a much greater amount than 78.3%, this data leads to doubts about the barriers that technology can provide for the student and that other variables must still be considered for the maintenance of students in college until their completion [15].

Based on this, some studies show that there are variables that contribute to the occurrence of this dropout in higher education such as: age, gender, failure, debt, readjustment of the value of the school semester. And what institutions can intervene in these aspects stimulating the students' academic lifetime, with the exception of age and sex, because the other factors can suffer direct interventions, whether pedagogical or financial, thus providing a service to the students in order to solve their difficulties in following the course, which culminates in failing, or even in relation to the payment of the course fees [11].

Point out that among the main situations that encourage students to drop out are the conciliation between study and work, readjustment to the new teaching method, understanding more complex information, basic knowledge of students from underprivileged classes, as well as situations that involve the need for financial investment such as the purchase of teaching materials and registration for academic events. And that for such situations to be overcome, it is necessary to have a good institutional support through a qualified team and with a methodology favorable to the student, thus meeting the different profiles [29].

Consequently, educational institutions need to be more prepared to take responsibility for factors that affect student evasion, providing a universe of flexibility so that academic adaptation becomes more simplified, minimizing the impacts caused by social distance [35]. Making the digital world a quality support for the increase of learning and allowing the democratization of education.

VI. CHALLENGES OF DISTANCE EDUCATION IN BRAZIL

Some social investigations within the learning environment study and analyze more efficient ways of improving learning, including for those students who have a certain difficulty in assimilating the content passed by the teachers [32].
Although all knowledge is changeable and enriching, the new technologies provoke a certain resistance among teachers, thus there is a certain opposition to the use and appropriation of educational technologies, hindering the emergence of new forms of language, new ways of exposing and explaining reality. Thus, with the arrival of computerized systems, innovative situations of knowledge transmission and production of a thinking and qualified society emerge [1].

For these methods broaden the world view, transform communications and change behaviors bringing new ethical standards, new conceptions of reality, in which it puts the higher education system in a condition to review its role in the formation processes of the subject [17]. But it should not be understood as a substitute for face-to-face education, but as a way of adding the same education process according to [7].

Therefore, one of the expectations for the coming years is to expand educational centers, increasing the possibilities of learning, through technological alternatives, within an increasingly computerized and diversified social conjuncture [10].

Thus, this computerized "revolution" will bring more learning possibilities, integrating the traditional environment with technology, developing digital learning environments for human formation [2].

Presents in his study a need for a new context of graduations, the conflict between traditional and digital institutions can bring difficulties in teaching, in which it demands readjustments to the new demands of society, through wide receptivity to changes and the search for new teaching models, from the redirection of its mission. Thus, the computerization of education can favor such adaptation for the growth and or improvement of institutional teaching, but it must be done in a harmonious and complementary way to improve the learning system [31].

To change the higher education system, the Brazilian government, through an implementation of public policy focused on diversity and the specificities of society, sought to expand the number of vacancies in DHE [18]. However, the acceleration of this growth through immediacy becomes a factor that influences the fragility of higher education, corrupting the system and stimulating a false sense of qualitative learning [8].

In the Brazilian education scenario, despite the advance in the number of vacancies in higher education [15], we can observe an approach of many DHE colleges with a context similar to face-to-face education, including systems of verification of student learning through traditional assessments.

Though, it must be taken into consideration that education is a procedure inherent to man with a high degree of complexity, where cultural, economic, social, political, and religious aspects are involved, thus becoming an indispensable practice for the growth of a just society, with critical ideas and understandings.

In this way, ICT becomes an indispensable instrument in the generation of new knowledge, as well as in the exercise of power and the creation of cultural codes, while generating wealth for society/community.

However, for these technologies to produce wealth it is necessary to have a mediator, someone capable of having all the information processed and reverted into knowledge and opportunities, through the teacher who will favor the communication between the student and the technology [17].

Still, the faculty at a distance has a low-quality image, the teachers and tutors have little or no experience for DHE training, the institutions have limitations of infrastructure and technological resources, precarious performance of the teacher/tutor, precarious pedagogical support and high number of students per teacher/tutor [28].

And that if the idea is to "revolutionize" by promoting access to education through computerization, it is necessary for educational centers to look for complementary alternatives such as "hybrid" teaching, by joining classroom methods and technological learning innovations, provide more possibilities for knowledge and not use DHE as a substitute for traditional teaching.

VII. CONCLUSION

The DHE has expanded its collaboration in increasing the number of vacancies in Brazilian higher education and in the conquest of the most diverse academic content, especially because it is a teaching method that involves digital environments and can break the barriers found in traditional education. Because of this, it is believed that inclusion in undergraduate education will be even greater when there is a large-scale digital reach, in which it will stimulate the most diverse academic skills, through this innovative method, which has great territorial reach.

Yet, if there is no stricter control over the institutions and more standardized teaching criteria, DHE will have difficulties in being characterized as a qualified learning modality, even considering all the process that involves it, which are its possibilities of breaking down physical barriers, its easy access to the population, and the debureaucratization of the institutions for implementing this education.

In this way the educational public policies should work in order to favor the student community through the adequacy and interaction of the use of technologies, so that through a set of elements the access to learning quality is allowed, as well as the maintenance of the students in the graduations. The data show that in 2008 only 21.7% of the students enrolled in DHE education were able to complete it and in face-to-face education a much higher amount was verified, which was 78.3%.

However, it is necessary that new studies be conducted on the subject, bringing new scientific approaches to DHE, as well as points not covered in this article. Treating, this type of teaching as an additional element in human formation, by means of adequate didactics, well-defined and collective pedagogical projects in their phases and methods, allowing the evaluation of the progress of more effective teaching.

REFERENCES

Dario da Silva Monte Nero, Feira de Santana Bahia/Brazil, PhD student at the Federal University of Bahia - Brazil, Master in Public Policy Management and Social Security at the Federal University of Recôncavo da Bahia, Specialist in Education and Tutoring at a Distance, Graduated in Physical Education and Nutrition. Member at the Coordination for the Improvement of Higher Level Personnel.