Higher Education in Brazil: Determinant Factors at Distance Learning

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Abstract

The Higher Education by distance learning in Brazil has been growing substantially during the last decade. In this review that is presented here, a brief historical perspective of higher education in the national context, and the introduction of Distance Learning (EaD) will be addressed, considering recent changes, within the objective to identify determinant factors for distance learning at the higher education, emphasizing the guiding principles of the teacher in the teaching-learning process necessary in the 21st century.

Keywords: Distance Education. EaD. Higher education. Teaching-learning. Internet access

Introduction

The technologies are increasingly present on day-to-day life and it is not different in the globalized world for the society of the 20th century. Educational technology allows access any time, in any place and to certain extent democratic, especially regarding to academic access for distance learning education in the 21st century. The individuals, who are looking for progress through career advancement in academic higher education, find currently on the internet, a facilitator in the process of continuous and intellectual development (even when not physically present). The new technologies are driving the rapid growth of Higher Education via distance learning. However, this rapid growth has been questioned by several authors, althought the criticisms often surrounds the subjects of commercialization of higher education, specific information on Distance Education (EAD) viewed from different parameters is not widespread. The discussion on EaD in higher levels of education becomes indispensable, since, there is a considerable and still growing demand for this proposal of education via distance in Brazil. Moreover, it is important to consider some essential factors and their impacts, as well as the historical context of the national scene and its recent changes driven by socio-economic demands of global influence.

The World Declaration on Higher Education in the 21st Century, 1998, made by the United Nations Organization for Education, Science and Culture (UNESCO, 1998) highlights the vision, action and priority changes for the development of Higher Education. Education is defined as a process of social character or as a "methodical socialization of new generations" that "creates in man a new being" therefore, education exists as a function fot their own societies maintenance, or can be described as the "means by which it (the society) prepares, in

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the depths of the children, the essential conditions of existence". (DURKHEIM, 1978). The objective of this article is to identify what are the determinant factors in Higher Education via distance in the Brazilian context?

Initially, a Historical Perspective of Higher Distance Education in Brazil is presented with statistical focus, directed to a chronological approach towards the regulatory development context in recent years, highlighting the growing and evident demand for this type of education. The Regulatory Organizations of Higher Education by Distance in Brazil, as well as characteristics of the profile of the student population, will be addressed, followed by a discussion of the Guiding Principles on the process of teaching and learning in Distance Education in a third topic. The Determinant Factors in Distance Learning found by this research will be presented in the fourth topic, followed by a brief and final discussion.

1 Historical Perspective of Higher Education ny Distance In Brazil

The genesis of distance education in Brazil occurs in the 1960s, as the country still using media such as the radio, a process that evolves relatively quickly. Nowadays, there is the possibility of classes in real time transmitted via satellites. However, the Distance learning (EaD) expands significantly only after the regulations of the Law no. 9,394 /96, known as the Law of Basic Guidelines (LDB). Due to issues of significance, time and space, this study focuses on the expansion that occurs subsequent to this law being regulated, which has happened since 1996. It has been introduced as the contemporary form of Education via distance learning in Brazil. Some relevant factors influencing the context of the restructuring Higher Education nationally originates from "The World Declaration on Higher Education in the 21st Century" made by (UNESCO, 1998) that redefined higher education world-wide, based on the neoliberal principle and considered of international relevance to promote "the universality of knowledge" (CATANI AND OLIVEIRA, 2000). According to the decree no. 5,622 of Regulatory Legislation in Distance Education (EAD) as regards to the accreditation of Institutions for the provision of Courses and Programs in the mode of Distance learning, in its sole paragraph governs that "the institutions of scientific and technological research, public or private, of proven excellence and relevant research production, will be able to request institutional accreditation" for the provision of courses or programs via distance learning classified as:

I - specialization;
II - masters;
III - doctorate; and
IV - professional education technology of post-graduation

It is responsibility of the Ministry of Education to promote the acts of accreditation of institutions, for the provision of courses and programs via distance, for higher education (MEC, 2005). According to surveyed data published by the Brazilian Institute of Geography and Statistics - IBGE "the evolution of the number of teachers in the country, with at least a masters", was more pronounced in public institutions than in private, being the "federal (68.4 %) and the state (61 %) ". In the private sector, the number of graduated teachers was very significant and 47.1% had a master's degree when only 11.8% had the title of doctor. The growth in the total number of teachers in the period from 1990 to 2001 was 67 %, the growth in the number of teachers with a master's degree was much larger reaching 163 %, and with the title of doctor more than twice with 172% growth respectively. In that same year (2001),

the number of people without a college degree or just with the undergraduate course had a reduction of 28 %, when "in the North, Northeast and South of the country, the growth in the number of doctors came to overcome the growth in the number of teachers with master´s" (PORTO & REGNIER, 2013). According to PORTO & RÉGNIER (2013) in the year 2001 in Brazil, only 11% of the Brazilian population between 18 and 24 years were enrolled in higher education, with indices lower than all the other countries of Latin America, including:

1. Bolivia (22 %),
2. Colombia (23 %) and
3. Chile (24 %)"

2 Regulatory Organizations of Higher Education by Distance Learning In Brazil

According to the board directors of the Coordination for the Improvement of Higher Education Personnel (CAPES), distance education presents the greatest growth of public sector in the country, and the growth of enrolment in higher education by distance had a growth from 1682 vacancies in 2000, to around 8838.000 in 2009 of the total number of registrations performed, from this totals 21% represented institutions from the public sector and 79% from the private sector. In addition, 33% of these registrations are directly related to the education of basic education teachers. The number of distance learning courses had an increase from 571% in the period 2003 to 2006, starting with a total of 52 higher education courses and soon, increasing to 349 courses within the same period. The number of students had an advance increase of 356% in the period from 2004 to 2007, with a real growth from 159 thousand students initially, to 727 thousand, of which 73% of students were in private schools, during the same period.

Among the organizations responsible for monitoring the quality of distance education is the National System of Evaluation of Higher Education (SINAES). However, the results can also be measured through the National Examination of Student Performance (ENADE). The Open University of Brazil - UAB created in 2005, is formed of public institutions network, organized to promote the provision of such education via distance learning, in order to decentralize the education, in addition, it is allowing more access within more than 924 courses and 578 poles distributed around Brazil. Nevertheless, the concentration density of availability and access is geographicaly located in the south and east areas of the country. The expansion of higher education EaD does not occur by chance, but, due to the need for adequacy to compete economically and scientifically in a globalised world. Due to this socioeconomic need, and to comply with international standards, Brazil created the openings and the opportunities within a more democratic access for those students that could not reach the courses, due to problems of location and time availability.

In accordance with the Law, already mentioned in the first topic, which lays down the Principles and Guidelines for National Education. Higher Education should therefore "encourage the work of researchers and scientific research, aiming at the development of science, technology, the creation and dissemination of culture, and, thus, to develop the understanding of man and the environment in which they live" (BRAZIL, 1996). This democratization of access to education (EaD) also presents a cost/benefit to the student, compared with the cost of a higher education course or specialization based in the classroom, at the Institutions of Higher Education (IHEs), which in their majority are located in large metropolitan areas, taking into account the high cost of living, that would also imply in other unnecessary expenses involved in the process of travel, relocation and accommodation.

According to the Ministry of Education (MEC, 2005), through the programs of action of the Open University of Brazil (UAB) the national priority are the training courses for teachers, directed towards the training and qualification of basic teaching. Therefore, such courses as pedagogy, has priority in policy plan and development: "The priority is to provide initial training to teachers in effective exercise of basic public education profession, but whos still without graduation, in addition to continuing education to those already graduated". Due to this need, were created several Centers of support for the reduction of the distance between the support units and students. According to research conducted by the Brazilian Institute of Geography and Statistics (IBGE), notes however, that the distance education is growing also due to the great need for faster Education with quality and not only for graduation level, but also for specialization levels, as well as post-graduate and master.

For the students, distance education tend to require much more effort, focus, discipline and initiative, justifying the appeal and the prevalence of older students, on average only 22% of these students have less than 24 years of age, which can points out to specialization, a masters or even a second graduation rather than a first degree. Moreover, for these students the learning process tend to happen via a cognitive form of assimilation, reflection and research, exploring the environment (virtual) and content, transforming it and incorporating it.

3 Guiding Principles Of Teaching And Learning Via Distance Education

Teachers in Higher Education, need to know the guiding principles essential for the development and norturing of knowledge for an adequate profile, and performance that goes beyond being a specialized professional, but that also has an educators approach. The one who is co-responsible for the teaching-learning process, that is in harmony with the real nescesseties of political and social contexts, and that is attachead to the appropriate methodos of teaching-learning processes and in accordance to the real demands of the 21st century. For Masetto (2012) the process of teaching is being rethought in an innovative way by valuing the partnership and cooperation, between teacher and student, and between the students himself impetus for the process. It is worth noting that the new professionals of teaching need to be carriers of specific qualities, such as: be educators for both academic intelect, as for the professional expertise, facilitating these two processes. They must possess methodology and pedagogical competence so as to promote the continuous development of the learner, with its own parameters and those of institutional order, with methods very well developed in an appropriated manner, to provide the advice needed and to guide the development of logical and critical thinking that will be organized and individualized by the student, in order to develop students autonomy. Especially in the virtual learning environment (AVA) via distance, which requires first an understanding to allow the propper exploration of appropriate content and material in a virtual environment. The lack of enfase on the two parameters mensioned above, as for example, the assertion of expertise only, can induce the student to be a specialist worker, simply, by inserting them into the labor market rather than to develop a creator of theories, or an intelectual academic. Therefore, there is a need to emphasize that this should be a councious and autonomus options of the student.

In fact, the process of virtual learning should be related both to research activities of students, as well as to the teachers, including their complete knowledge of the tolls and means required to teach and learn in EaD. As Masetto (2001) suggests in his writings the learning process "includes situations in which students learn how to search for information, to find

them, then analyze and relate them with the previous knowledge" giving these knowledge its own meaning, writing conclusions, noting situations, registering them, and searching for solutions to solve various problems or to develop a project. In this way, the teacher helps to develop not only the ability but also the individual skill of the student, combining the technique with the ethical training of the individual, so that this will be significant and contínuo, so that they may in the future, have a posture in society of an active citizen, within a thoughful, present and critical attitude, but that is fundamentally correct and intact in its own essence.

According to Masetto (2003) "The attitude of the teacher is changing: from a specialist who teaches towards a professional of learning-teaching that encourages and motivates the learner, which presents with the provision to be a bridge between the learner and their learning". In this context, of teaching and learning via distance are inserted the guiding principles, based on four submissions chosen by UNESCO to serve as support on the reform of higher education, in order to be more adequate and appropriated to the needs and demands of the current society, it recognizes the search for educational alternatives in this environment of a rapid changing world. These essential foundations for the training of New Professionals of Teaching, are defined by Jacques Delors as the four pillars of Education:

1. Learn to know; for the consturção knowledge widely
2. Learn how to do; through theoric propositions and practical activities
3. Learn to live together; through collaborative approach and cooperation
4. Learn how to be; stimulating the involvement in education initiatives

In the proposal of the four pillars, the author suggests that teachers must think in education as utopic, or as a dream for a motivation that go beyond the current reality, or that it may be directed to a reality to be constructed in the future (DELORS, 1998). In addition, this relationship in education should not be seen as a formal relationship, but as in deepth to build bond in society in a democratic manner and humanístic, which replace the superficial bonds existing only on the surface today, by a collective foundation, concious and deep so that the society of the future is both humaine as well as solidarian, both aesthetic and ethical beings. Through these four pillars already mentioned above, the author sources the fifth idea, which logically originates from mearging the four pillars togheter or a fifth pillar: 5. Learn how to create.

As mension by Cunha (1997) "the quality higher education has as presssuposto that knowledge production is also by teaching".

> " ... If the study gives enormous contribution to the formulation of new scientific parameters, the production of knowledge through teaching, before scientific products, reaches the production of thoughts, the cognitive capacity and aesthetics of the apprentice". (CUNHA, 1997).

For Pimenta and Anastasiou (2002) the challenge to be currently considered in the construction of higher education is that the "advance in the process of teaching and professional development, through the educational preparation that will not yield in separate processes of personal development and Institutional". It is worth adding that the techniques used by the teachers of distance education, can be either relative or limited to their own training, regardless of which area of training that may be, but relevant to the institutional quality and care taken to develop in this teachers, a critical eye, creativety and dynamic thinking of this new professional, which in turn, will influence the new generations, both in educational context and in the social sphere.

In addition, it should be emphasized that the EaD requires from teaching professional more than continued education, it requires a logic procedure and a rational attitude, combined with the dominium of scientific methodology, which is clear, to direct the student and guide them during the process of teaching and learning, thus stimulating, their potential and their critical and mental exercises abilities to directed it towards the elaboration of thought itself, as in EaD it can occur in two formats; sincrona, or asynchronous form using methodologies supported by the three pillars of Distance Education:

1. Individualized Learning;
2. Mediated Learning and
3. Cooperative Learning.

Higher education EaD, is in one way or another linked to the quality and the performance of the Institutions of Higher Education - IES, which is governed by the institution of SINAES and the law nr 10,861 /2004, going far beyond the mere ability of the teacher to mediate the knowledge in the classroom or online. The impactant factors can not be ignored which can be direct or indirect but can interfere in the process of teaching and learning, and to look at it simplistically and fragmented, is to ignore several important factors, which are not always on the helm of teaching practice nor surronded the interpersonal relationship with the students. Masetto (2003,) has argued that the role of the teacher in the 20th century is to make this process happen. For Masetto it happens as a moving crane not static, actively collaborating for the apprentice to achieve their goals.

Therefore, the institutional self-assessment of IES proposed by the SINAES serves also to theyir own improvement and institutional development, because "the greater purpose of self-assessment is to serve as foundation, if it is used to raise the awareness of the reality of the fragile factores to be improved" not to impact negatively onto the student learning process. Self-assessment takes importance and is only valid when it detects the causes of fragility, producing actions for which the deficiencies are corrected, as Queiroz sugests: "Only makes sense if the results are transformed into subsidies for refinement and improvement of the quality of the academic work, the completion of the institutional mission" (QUEIROZ, 2011).

4. The Determinant Factors in Distance Education

According to analyzes of surveys carried out by the Brazilian Institute of Geography and Statistics (IBGE), the biggest increase in internet access among the age range from 25 to 39 years old, occurred between 2008 and 2011. However, the data of greater significance appears among the two age groups as follow: "the age groups of 15 to 17 years (74.1% in 2011) and 18 or 19 years of age (71.8 %, in 2011) ", for all years researched (analysis of research), these two age groups had the highest percentage overall of people who have accessed the Internet. In relation to the States of the country, that have the higher percentage of internet access, as it was expected, includes Sao Paulo among the first three on the list and in the year of 2011 appears in the following order:

1. Federal District   71.1%
2. Sao Paulo   59.5%
3. Rio de Janeiro   54.5%

Although the access among women has been growing for the period between 2005 to 2011, men still make up the largest number of internet users when compared to women. The access

is equivalent for both sex in 2011, among the age group ranging from 40 up to 49 years when the percentage of surfers among men and women becames the same . (IBGE, 2011). The professionals of Sciences and Arts in 2005 already were the highest percentage of people who used the internet, growing significantly to 72.2% in 2011 and further reaching 91.2% (later) (IBGE, 2011). During all years surveyed, the internet access appears linked to social and economic indicators. Therefore, among the social classes with lower wage or salary is also the lowest number of people with access to the internet. People with monthly income per capita (household) from 3 to 5 minimum wage salaries, were the ones that showed the highest percentage of internet access, overcoming those who receive more than 5 minimum wage salaries (IBGE, 2011).

According to Valente (2003) the EaD "different types of interaction" such as: broadcast, virtualization of the traditional school, being together virtual, or flexibility in use of approaches" that will "determinate the different types of pedagogical approaches". Within these concepts, technologies and types of interactions via the internet, is the Virtual Learning environment (AVA) that includes forums, warnings, links, wiki, chat, deliveries, among others, are fundations required for the distance education to happen. On this occasion, technology will be addressed simply as a necessary tool, because in EaD it becomes only a means to an end, (communication from the perspective of the student and the teacher) that although nescessary, is totally dependent on the pedagogical procedures, and the appropriate methodologies used, as well as a good administration and organization very well defined by a team of teachers, with support and quality handled appropriated for distance learning environment. The author positively refers to the building of knowledge such as: "is something built by each individual, your very own and cannot be passed on to the other - what is passed is the information that comes from this knowledge, however, never the knowledge in itself".

Machado (2014) on observations made during the conversion of media for the implementation of Distance Learning in higher education course of Pedagogy of a University in the Northwest of the Country, says that "the observation demonstrates the lack of knowledge of the teachers in the use of technologies", among a total of 50 academics, only 52% of them had access to the internet at home, and in this context, only 56% of the teachers had the complete comand of the computer system used internally at the University. In addition, there were shown obvious difficulties such as: "the use of the laboratory for the implementation of activities that must be carried out, especially on the online stiudents portal, through the use of learning tools, where the educational materials and videos were posted for the students" (MACHADO et al, 2014).

Abreu (1999) says that: "distance education or virtual interactive, contains in its womb the seed of democratisation and trans-disciplinary aspects" that meets in an articulated manner "the broad needs and educational challenges in the world of education, work, culture and citizenship". It is worth adding to this context the interdisciplinarity as the different areas of knowledge met or even mearges, we must observe that there is not a single model of distance education and the programs may have different designs and multiple combinations of languages and educational resources and technology" in accordance with the benchmarks of quality for higher education via distance (MEC, 2007).

Valente (2003) argues that "the teacher presents a discourse of knowledge construction and in practice, but exercises only the role of transmitting information". According to Demo (2009) the construction of knowledge takes place as suggested by the Piagetian theory, and the research has a vital role in the educational process at all levels of education including the graduation, not only as scientific principle, but it should be applied as an educational principle.

Masetto (2003) has suggested that the teaching of higher level requires "the domain of at least four main axes of the teaching-learning process", and that in addition to the domain of this concept the teacher needs to be the "designer and manager of the curriculum", that must have a thorough understand of the relatioships "teacher-student and student-teacher", as well as the knowledge of the theories and practice of basic educational technology" (MASETTO, 2003). However, some of the problems in EaD, are not linked to the pedagogical mediation of the teacher, and seems to be related to the infrastructure of Higher Education Institutions (IES), as many institutions have some kind of a deficiency or prroblem, especially in the structure needed and required in order to offer a quality education via distance. Furthermore, these issues can be exacerbated by the type of mentality of those who leads these Instituitions, within a conception of teaching that is archaic and does not have any relation with the process of construction of knowledge by research.

Positively, some private Instituitions (IES) are investing in new technologies and are also adopting new concepts such as: Structuring of disciplines with reference materials and supplementary materials; reorganizing the Virtual Learning Environment based on the concept of "Trails of Learning" ; Hiring Teachers Tutors to mediate the educational processes; Acquiring license of Blackboard Collaborate to conduct web conferences and to promote activities that are more collaborative and interactive; Training of pedagogical teams and training of technical staff; Offering free course to students for "Initial Training in EAD", with the aim of empowering them on the new concepts of learning. Although, the Trails of Learning world seems as an emerging concept in the area of education, the same is not true for the corporate environment, where it is has long being used, for the development of individual skills directed to the consolidation of ongoing projects.

Freire (2011) emphasizes that: " ... the respect that we have as teachers towards the students, is seldomly achieved, if we are not treated with dignity and decency, by the private or the Public Education Administration". Although the process of education through the use of technology should be widely available, for Cox (2003) "technology should never be considered more important than the teaching-learning process", therefore, the search for knowledge is what should be in constant evidence from the students perspective. Due to this reason the technology as the online portal is approached as a mere tool, which integrated with the teaching action can be transformed into learning. Nevertheless, within the awareness that the technologies used is also a factor, as well as the reliable access to the internet that can have a direct impact in the teaching-learning process via distance. Therefore, it is not only essential that the new Teachers for teaching in current EaD domain, to have the complete dominium of these means of communication but it is fundametal for a Higher Education Institutions (IES) the provision of good training to achieve such high quality standards.

Final Considerations

The rapid growth of the EAD in Brazil during the last decade, also brought many questions about the quality of education, in addition it rouse many problems of adequabilidades and what really is relevant to teach in higher education. This research on the determinant factors in Higher Education via distance from a teaching perspective presented a systematic review of the topic that brought about a contextualized current view, considering the scenario of our current society. Whithout neglecting the recent national history, its regulations, the organizations and their priorities for higher education in the EaD mode, whereas the global influence of international order. However, studies of the results presented here should be

observed with caution, because generalizations are not always appropriate in all circumstances, especially taking into account the territorial extension of a country such as Brasil, as well, as the internal demographic, regional and socioeconomic differences.

Positively, the statistical surveys of IBGE (2011) presented data considered more tangible and reliable at national level on the internet access. A fundamental tool in the teaching-learning process via distance. The observational study used as evidence, as well as appropriate for the study within the educational organization where it was developed, has observed how the teachers behaved at work, referring to the use of computerised systems of communication for EaD in side the educational institution, in a specific context, nullifying any discrepancy between what people say and what they really do. The access to the internet appears correlated the socioeconomic inequilities found around the country and is an essencial part of the set of communication technologies required for education via distance. Additionaly, access to the internet should be widely available and disseminated to the real fight against social exclusion.

Therefore, it is evident that the complete dominium of these technology tools for teaching-learning applied in EaD, as well as the knowledge, skills and ability for a didactic teaching is essencial to nurture the virtual construction of knowledge, standing out as some of the factors not only determinant, but fundamental. Complemented by individual qualities of the teaches who is also related to their own ability to adapt to new concepts, new technologies and new methodologies of multidisciplinary and interdisciplinary spheres that serve not only as their own professional training, but also contributes in some extent by encouraging the development of scientific production, the intellectual development of the student since graduation, enabling the training of a citizens, a person who will know how to position themself in the near future, as professional with ethics in the full exercise of their citizenship. The question we need to ask is if we have these qualities and this base of scientific knowledge as a teacher in order to encourage and enable such development to flourish in our students?

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