

# DISTANCE EDUCATION: A DIGITAL PROJECTION.

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**Category:** Research and Evaluation

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**Nature of the Work:** Research Report

**Summary:** The world lives a transition moment, whose main factors of changes are due to economical pressures, demands for information professionals, and knowledge has a pivotal role. An increasing number of higher education institutions (HEI) are opening education programs offered at the distance through Internet. However, still most of the teaching institutions not accompanying the same rhythm of the new technologies in the market job, turning the teaching-learning process deficient. The purpose of this paper is to present the possibilities and the importance of the distance education (DE) for the Brazilian education. The studies show that DE is a growing phenomenon, but it does not implicate that the traditional education is reaching the end.

**Key-Word:** Internet, Computers, Projects assisted by computers.

## **Introduction**

The world lives a transition moment, whose main factors of changes are due to economical pressures, demands for information professionals, and knowledge has a pivotal role, considered as "leadership-car".

Higher Education Institutions (HEI) are opening perspectives to those changes implanting education distance programs as indispensable Internet tool. These cultural and technological changes should be present in all institutions objectives as innovation knowledge and competitiveness requirements.

The Technology of Information (TI) has the potential of solving new Education Distance programs, offering information accessibility with low costs and without geographical limits to adult students.

The teaching institutions are not accompanying the same rhythm of the new market job technologies, generating deficient teaching-learning process.

"The illiterates of the year 2000 won't be individuals that don't know how to read and write, but those that don't know to learn, to unlearn and to learn again" (SCHRUM, 2004).

Some results presented in the Brazilian test, ordinarily named "Provão." demonstrate the need of new directions, which can be initiated in high education institutions by offering different modalities of distance education.

## **Main purpose**

The present study was carried out to review the distance education technical possibilities and importance.

## **Brief Historical**

The distance education (DE) has a long history of successes and failures. Its origin is based on the correspondence education experiences carried out in the end of XVIII century, with wide development starting from middles of the XIX century. For the DE development, different type of Medias has been used, from the material as printed paper to on-line simulators with great interaction between the student and the producing center. The use of artificial intelligence, or even synchronous communication between teachers and students, are nowadays important targets (NUNES, 1992).

The DE has been used for training and teachers' improvement in service, as well as in the development of non formal educational programs for teaching adults in the health, agriculture and Social welfare areas, as much for the private initiative or for the government. Nowadays it is growing the number of institutions and companies that develop human resources training programs through the modality of the distance education (NUNES, 1992).

The literature is unanimous that the first institution and the first distance education course were in 1969, by the Open University of England. It is a mark and a success model, that has outstanding performance until today (NUNES, 1992; MOORE & KEARSLEY, 1996).

In Brazil, since the foundation of the Radio Monitor Institute, in 1939, and after the Brazilian Universal Institute, in 1941, several experiences were initiate and

taken to term with relative success. The Brazilian experiences, as much of government institution as of private ones were many and represented, in the last decades, the mobilization of great contingents of resources. The results of the past were not enough to generate a government process and social acceptance of the distance education modality in Brazil. However, the Brazilian reality already changed. The government created laws and established norms for the insert of this education modality in this country.

There are available several DE platforms, as for instance: WebCT (Canada), Blackboard (USA), TelEduc (Unicamp), and COL (University of São Paulo). These last ones are national products and they were developed, respectively, for the Nucleus of Applied Informatics in Education -UNICAMP (NIED) and for the Research Laboratory from the Department of Computational Engineering and Digital Systems (PCS) of the Polytechnic School - University of São Paulo.

The using advantages of those different platforms are the didactic material accessibility to the student through the Web, and in the maintenance and updating facilities of these materials. Adding to this, other advantages are the wide concentration of related informations and, the use of interactivity tools between students and teachers.

The didactic material developed by the teacher is independent of this tool, meaning that it can be constituted by videos, animations and other documents. The DE tool manages this content which will be available to the student. The resources access control is accomplished through passwords, controlling who indeed can have access.

These platforms make available, also, besides the contents control, the interactivity tools as the chat and the forum, used for group activities, for automated multiple-choices tests and, among others, management tools for the students' doubts.

### **Regulation of Distance Education in Brazil**

The legal bases of DE in Brazil were established by the following government documents:

- Guidelines and Bases of the National Education Law (Law n.º 9.394, from December 20, 1996).
- Decree n.º 2.494, February 10, 1998 (published in the Federal Official Gazette in November 2, 1998).
- Decree n.º 2.561, April 27, 1998 (published in the Federal Official Gazette in April 28, 1998).
- Ministerial Order n.º 301, April 07, 1998 (published in the Federal Official Gazette in April 9, 1998).
- Resolution CNE/CES n.º 1, April 03, 2001, which establishes norms for the operation of masters degree courses.
- Ministerial Order n.º 2253, October 18, 2001 (published in the Federal Official Gazette in October 19, 2001).

The distance education in Brazil was established by the Guidelines and Bases of the National Education Law (from December, 1996), in February, 1998.

In agreement with Government Decree n.º 2494/98

...the distance courses certified by “certificates” or “diplomas” after conclusion of the elementary education level for youths and adults; the high education level; professional education and undergraduate courses will be offered by public or private institutions specifically accredited for that purpose (...)

In this manner, the courses proposals in these levels should be directed to the municipal or state system agency responsible by the institutions accreditations and courses authorizations, excluding institutions linked to the federal education system, which accreditation should be made by the Ministry of Education.

In cases of undergraduate courses and professional education level, the interested institution should be accredited by the Ministry of Education, requesting the authorization for each course that intends to offer.

The Doctoral and Master Degree distance programs still not having the governmental authorization in Brazil. The post graduate courses like “specialization” were considered free of authorization until a couple years ago. However, with the Opinion n.º 908/98 (approved in December 12, 1998) and the Resolution no. 3 (from May 10, 1999) that establishes specialization courses validity certificates conditions, it became necessary the regulation of such courses in the distance modality.

### **Continuous learning**

Distance Education (*Ferstudium*) is a systematically form organized of self study where the student instructed starting from the study material that is presented. The following and the supervision of the student's success are accomplished by a group of teachers. That is possible through the application of communication ways capable to get long distances (Nunes, 1992).

Harasim et al (1996) summarize the on-line courses characteristics as time and place independence and communication from many to many, reinforcing the true cooperative learning and the communications dependence supported in texts to stimulate comments based on reflection. Other advantages of using that distance learning type are the instantaneous communication (synchronous) and the delay one; the access of and for geographically isolated communities; the multiple participation in the activities; the cultural exchange of the diversity, and the recognition of similarities among the people of our world.

The distance education, by meaning, is the teaching that happens when the teacher and the student are separate (in the time or in the space). In the sense that the expression assumes today, it is emphasized more the distance in the space and it intends to be outlined through the use of telecommunication technologies and data transmission, voice and images (including television or video). It is not necessary to stand out that all those technologies, today, converge for the computer (KEYS, 1999).

According to the Brazilian Educational Government Agency it is observed that from 1991 to 2002 had an increase of 83.31% from the total of Superior Education Institutions. It is emphasized that in the private institutions the increase was 114.90% and in the public institutions -14.10%.

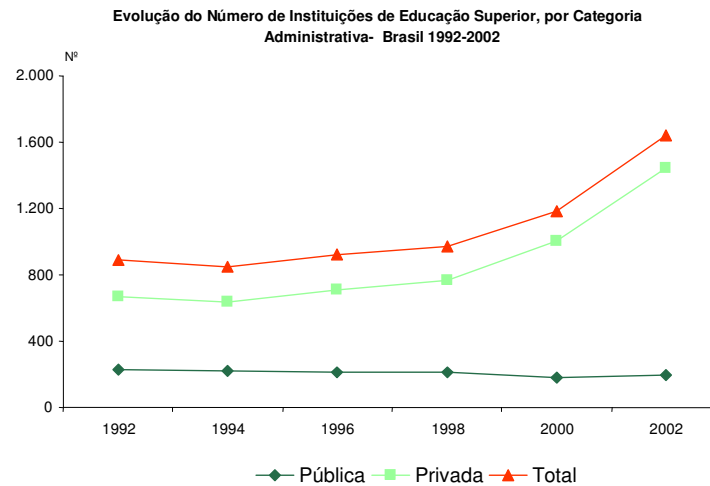


Figure 1: Evolution of the number of Superior Education Institutions by Administrative Category - Brazil 1992-2002

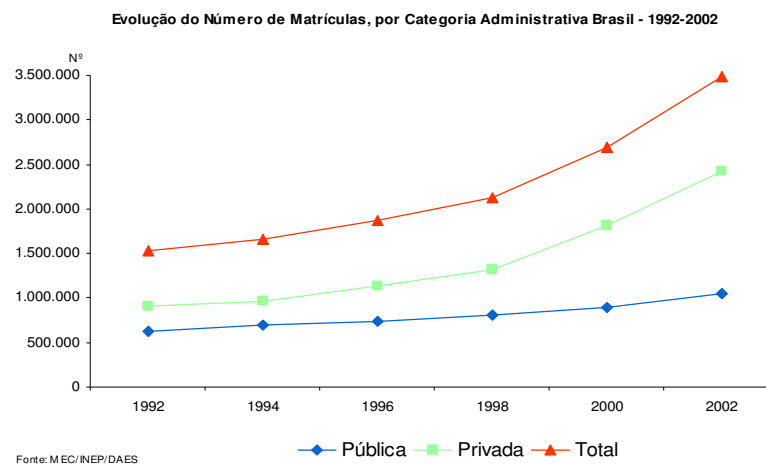


Figure 2: Evolution of the number of registrations, by Administrative Category -Brazil - 1992-2002.

According to the Brazilian Educational Government Agency it is observed that in the period from 1991 to 2002 the number of registrations in the public institutions had an increase of 67.02% and in the private institutions 167.98%.

The increase in the number of the University entry through selective exam in the period from 1992 to 2002 was of 96.34% in the public institutions and of 225.92% in the private institutions.

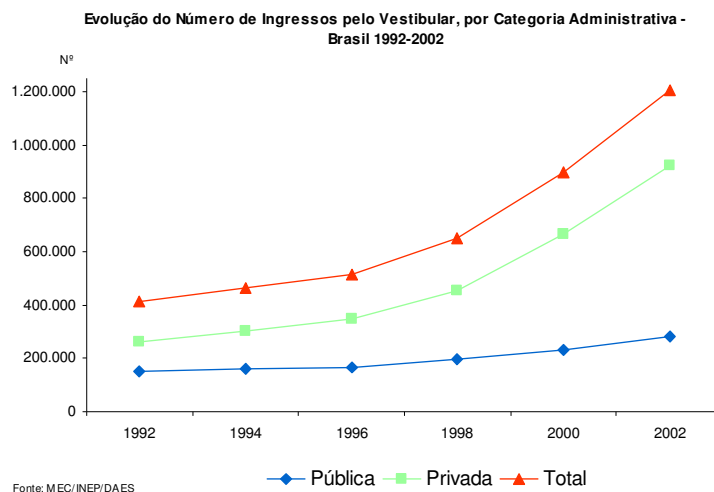


Figure 3: Evolution of the number of the university entry by selective exam, by Administrative Category - Brazil 1992-2002.

The result of the Brazilian Undergraduate Course Exam from 2003 is not exciting. According to the report published by the National Institute of Studies and Education Researches (INEP, 2004), an expressive number of the assessed undergraduate courses had the student performance below the average. Of 26 areas that were examined this year, only two obtained general average above 50 points, in a scale from zero to 100. In first place was the Dentistry courses, with medium note of 56 points, and in second place were the Phonoaudiology courses, with average of 55.7 points.

From the remaining group, just other five areas had punctuation between 40 and 50 and among the others, all had average below 40. The Literate courses had the smallest index among the general averages: 19.7 points. Using the absolute scale, the results of this Exam, among students of 5.897 courses, reveal that none of them obtained superior average to "80" points, and only 1.5% obtained average between "60" and "80" points. In the note zone between "40" and "60" points were 26.7% of the courses, and 58.2% were positioned between "20" and "40". In 11.9% of the courses, the average was below "20."

Considering the students' category that use the computer daily or from 3 to 6 times a week, they are located in the largest proportions (26.7% and 27.0%, respectively) of students positioned in the group of better performance in the Brazilian Undergraduate Course Exam (ENC 2003). Regarding the students' category that never used the microcomputer, they were located in the largest proportion of students (42.4%) positioned in the group of worse grade in the Exam.

Those data show the use of the computer as factor that influences the student's performance.

The results of this evaluation confirm the students' unpreparedness for the job market. They are still immature and in learning process.

The education uneasiness, that we are preponderant, drive to alternative routes of a continuous learning. The distance education is considered as potential qualities for the future.

### A Digital Projection

Distance education is a growing phenomenon, but it doesn't implicate that the traditional education is reaching the end. The electronic pedagogy doesn't defend the teachers' elimination, but the opposite. It is motivated the development of new approaches and abilities for the faculty, so that they teach more efficiently in that scenario (PALLOFF & PRATT, 2002).

It is important that the institutions include the training and the teacher's development in the on-line learning process.

One of the basic requirements for the education in the XXI century will be to prepare the students for an economical system whose base is the knowledge, which will be the most fundamental resource for the economical and social development. The curriculum content and the approaches used in the society of the XXI century are being wrought through the discussion and debate in the public, academics and businesses sections. It is clear that the current education models, the structures and the approaches are inadequate. The students need resources of information, abilities, relationships and new and different social roles. The traditional education model, based firstly on the concept of the school and of the teacher in the classroom, as if they were islands without communication with the society and other education institutions, it won't produce competent people for the knowledge society (HARASIM et al., 1996).

The possibility of the distance education use in Higher Education Institutions is foreseen in the Law nº 9.394, of December 20, 1996.

Art. 3rd – The institutions accreditation will be made, originally, a single time, with periodic renewals, in the terms of the effective legislation.

§3 rd - The teaching institutions already accredited for the higher education can offer activities of formal distance education, since foreseen in its Institutional Development Plan approved, or in alteration of this, also approved, and obtained the pertinent authorization of the courses.

§ 6th - The offer of until twenty percent of the workload learning demanded to complete the higher education from recognized institution or authorized courses with disciplines that are not teaching in the classroom format doesn't constitute distance education, for the effects of this Decree.

Table 1: Number of students enrolled in Distance Education courses at officially accredited institutions in Brazil, according to the accreditation level and course type. 2004.

Accreditation level	Course type	Number of the student	%
Federal	Undergraduate and Technological	89.539	28,9
		61.637	19,9
Consolidates*	Undergraduate and/or Graduate	8190	2,6
	<b>Federal Level Total</b>	159.366	51,4
State	Youth and Adults education, Technical, Elementary and Higher	150.571	48,6
Municipal		20	0,006
	<b>General Total</b>	<b>309.957</b>	<b>100</b>

Source: ABRAEAD/2005

\* Three institutions informed the number of students consolidating undergraduate with the graduate degree data.

The data showed in the table 1 were referred by the institutions themselves or have officials' data from the Education and Communication Ministry and from the State and Municipal Education Council. The existence of 166 institutions officially accredited to teach Distance Education was verified in the country (SANCHES, 2005).

The data found in Table 2 demonstrate that the area with larger number of enrolled students in distance education courses is the Southeast (53%), followed by Northeast (18.7%), South (17%), Middle-west (7.6%) and North (3.7%).

Table 2: Distribution for area and state of the enrolled students in Distance Education courses at officially accredited institutions in Brazil. 2004.

<i>Region</i>	<b>Estate</b>	<b>Number of Students</b>	<b>%</b>
<b>North</b>	Pará	2.144	
	Tocantis	9.500	
	<b>North</b>	<b>11.644</b>	<b>3,7</b>
<b>Northeast</b>	Alagoas	1.150	
	Bahia	500	
	Ceará	52.687	
	Maranhão	2815	
	Sergipe	830	
	<b>Northeast</b>	<b>57.982</b>	<b>18,7</b>
<b>Middle West</b>	Distrito Federal	17.143	
	Goiás	836	
	Mato Grosso	3500	
	Mato G. do Sul	2109	
	<b>Middle-West</b>	<b>23.588</b>	<b>7,6</b>
<b>Southeast</b>	Espírito Santo	6.777	
	Minas Gerais	26.340	
	Rio de Janeiro	49.865	
	São Paulo	80.905	
	<b>Southeast</b>	<b>163.887</b>	<b>53</b>
<b>South</b>	Paraná	29.846	
	Rio Grande do Sul	2.618	
	Santa Catarina	20.392	
	<b>South</b>	<b>52.856</b>	<b>17</b>
<b>Brazil</b>	<b>Total</b>	<b>309.957</b>	<b>100</b>

### Conclusion

It cannot ignore the existent difficulties in Brazil, nor the deficit of the government institutions, factors that are worsened by the physical facilities conditions, and by the human and materials resources that demand improvements. The fulfillment of those needs would turn the education organizations more



appropriate for the performance of the roles that fit them. However, it is vital the implementation of new teaching-learning politics in this context. The distance education comes as a possibility to increase the academic teaching by incorporating the repressed student demand. Considering that the Census from 2000 points out the existence of 23.365.185 youth in the age group from 18 to 24 years old. Whether it is considered that from this age group comes the great majority of the students for the academics courses and if this number is compared to the number of students registrations in the Higher Education Institutions in 2000 (2.694.245), it is verified that only 11.53% of the youths have access to the private or public higher education.

For Mota (2005), the importance of the Brazilian Open University is observed in the strategic character of the higher education and in the scientific and technological development for the sustained growth of the country; in the need to increase the number of vacancies in higher education for the youths with age from 18 to 24 years old; as well as to assist to the demands of the continuing education. For that author, the demand to improve teachers' performance for the elementary education and the need of offering other alternatives for the professionals' improvement at companies and corporations are also important when mentioning the distance education.

“The Open University would not be one higher education institution in the country, but a new concept and an urgent need. Among the characteristics of an open university are: open in the entrance, democratizing the access to the population, flexibility the traditional exam processes; offering options and activities to incorporate information and communication technologies; open in the exit, allowing to the students to conclude, or to suspend their studies with larger flexibility, considering their needs”. (MOTA, 2005).

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