We are IntechOpen,
the world's leading publisher of Open Access books
Built by scientists, for scientists

6,900
Open access books available

185,000
International authors and editors

200M
Downloads

154
Countries delivered to

Our authors are among the

TOP 1%
most cited scientists

12.2%
Contributors from top 500 universities

CLARIVATE ANALYTICS
BOOK CITATION INDEX
INDEXED

WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index
in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?
Contact book.department@intechopen.com

Quality of Undergraduate Distance Courses in Brazil — The Points of View of Human Resource Managers from Industrial Organizations

Ana Alice Vilas Boas and Gustavo Henrique Nogueira de Andrade

Additional information is available at the end of the chapter

Abstract

The main objective of this study was to assess the perception of human resource managers of industrial organizations in relation to the quality of undergraduate distance courses in the state of Minas Gerais. We asked human resource managers to analyze some attributes of graduated employees. We also requested them to compare some features between in-classroom education and distance education. According to the results, both undergraduate courses lack practical application of knowledge learned, since many of the graduates come to the market too naïve. This situation is more easily bypassed by graduates from distance courses, because they normally belong to an older age group. Regarding training of new cadres, many organizations highlighted the democratic role of distance education for continuous development of work force. It is because distance education is the main enabler of formal education for people with families and those without the availability of time to attend formal courses. These managers pointed out that responsibility is one of the most important characteristic of the employees graduated at distance courses. They are also better to associate theory and practice and to deal with modern technology. Moreover, the possibility of developing other complementary experiences to the course seems to be an interesting opportunity.

Keywords: E-Learning Assessment, Human Resources Management, Distance Education, Market

1. Introduction

In recent years, given a new federal government policy, there is a significant movement to increase enrollment in undergraduate programs of public and private universities in Brazil,

with remarkable expansion of places for distance education. According to the Anuário Brasileiro Estatístico de Educação Aberta e a Distância, more than 2.5 million of Brazilians studied in distance education courses in Brazil in 2007, as in reference [1].

For this reason, Palloff and Pratt state that it is still necessary to increase the efforts to improve the quality of the services offered at distance education [2]. For these authors, it is indispensable that course coordinators, teachers and professors, course designers, and other professionals involved with distance courses search more and conduct more efforts regarding students treatment. In this matter, social psychology can contribute assisting in determining students' expectations and desires in order to assess the needs of apprenticeship. Additionally, other sciences, such as Management and Economy, may help to access market expectations regarding the performance and quality of employees who attended distance courses.

Bastos highlights that professional qualification can be understood as an important justification to the success of organizations and even to countries to keep competitive in the scenario of uncertainty and turbulences. Besides, the re-structuration of the production process demands new forms of action and reaction in the market, thus requiring new skills and competences to stay competitive worldwide [3].

As a result, many studies and researches about distance education are gaining strength around the world. In Brazil, we may give attention to authors who are investigating the institutions practicing distance education through methods that evaluate their competences. Among them, we may point out in [4-17]. Outside the country, we may give attention to other authors such as in references [18-26].

When thinking about quality and assessment, we must think about appropriate methodologies to the new market reality. Thus, according to Carlini and Ramos, in reference [6], the concept of evaluation should be understood by the following aspects: diagnostic, formation and somatization, as a practice that search to understand, ameliorate, qualify and quantify the processes of apprenticeship, giving them particular meanings and orientation to decision-making process in both in-classroom and distance education. In this matter, authors in references [11, 27, 13, 28] state that it is necessary to have a rigorous process of evaluation and improvement of the adopted techniques and methodologies just to provide credibility and recognition to distance education in Brazil.

In this context, this chapter will focus on the following questions: Do undergraduate distance courses produce a process of qualified and effective learning that contributes to the practices of people development in the market? If so, how do human resource managers from industrial organizations in the state of Minas Gerais evaluate the performance of their employees graduated at in-classroom and distance courses? In other words, what are the perceptions of human resource managers regarding the quality of the distance undergraduate courses offered in the market? Thus, the main objective of this study is to assess the perception of human resource managers from industrial organizations in relation to the quality of undergraduate courses offered in Minas Gerais.

It is assumed that graduated students from distance management courses contribute to the organizations because these courses empower individuals to work at marketplace without increasing management costs of people's management.

In order to verify this perception related to formation of undergraduate students, this research deals with themes relating to the aspects perceived by the organizations that demonstrate the effectiveness of the learning process of distance courses. We also identified the most relevant attributes that undergraduate students should have to be well accepted in the market, and the differences between graduated students from in-classroom courses and distance courses. The advantages and disadvantages resulting from the integration process of a newly formed employees, as well as the main contributions that have been raised from these graduate employees were identified and evaluated according to the points of view of human resource managers of industrial Organizations. It was also requested to human resource managers a comparison between in-class and distance courses that made possible the identification of common and divergent features of the two learning methods.

Keeping in mind the issues discussed above, this chapter will elucidate the quality assessment of distance education courses made by managers of industrial organizations in Brazil. The chapter will be divided into five sections: a brief introduction and justification of the theme dealt in the chapter; some considerations about the theoretical bases for discussing the fieldwork research; methodological procedures adopted to carry on the fieldwork; presentation of the results and discussions compared with the literature review; and final considerations or conclusion.

2. Literature review

This chapter deals with a literature review about distance education, contextualization of distance education in Brazil, quality in distance education, human resources management and employee's qualification, and the new roles of human resources regarding distance education in order to discuss the findings about quality of undergraduate courses in Brazil from the perspective of human resource managers from industrial organizations.

2.1. Distance education

Contemporary society has undergone many changes, which in turn has generated substantial impact on the educational process. Souza mentions that the technological, informational and scientific revolutions have had a lasting impact on the history of humanity. This unique and remarkable period can be understood through two primary factors: a scientific scenario extremely developed with a technological breakthrough that covered all fields of knowledge and the dissemination of knowledge that quickly affects people from different social classes [29].

Given the above, where the changes are quickly and intensely present in society, formal education is becoming more important. This is because education improves the employee's

income, develops better institutions and organizations and brings economic and social development to the region or country [30].

Within this context, together with the beat and intense workdays, there is the rapid appearance of distance education in different countries. Nunes believes that the choice of distance education modality emerged as a means of providing educational institutions with instruments to meet the new demands for education and agile, quick and qualitatively superior training [31]. On the other hand, Moore and Kearsley present distance education as a planned learning that normally occurs in a different place of education, and because of this, it requires special techniques of course design, special education techniques, special methods of communication through electronic and other technologies, as well as specific organizational and administrative arrangements [32].

Additionally, Preti states that distance education is, therefore, an actual form of non-traditional teaching that is typical nowadays. It offers different ways of teaching and learning, using new methods, techniques and resources available for companies too, since most of its students have some particular characteristics [33]. These students are usually adults in the job market, live in distant places from educational centers, failed approval in regular courses, are very heterogeneous and with little time to study in classroom teaching.

In this scenario, these students seek this learning technique because they found it easier to plan their programs of study and evaluate the progress they made, and because they prefer to study alone than to study in regular classes.

Discussions on distance education (EAD) have multiplied in recent years. According to Suga, one of the reasons is that this system extends educational opportunities to a large segment of the population [30]. A great part of the population benefited from EAD system is made up of people who cannot attend classroom courses for various reasons such as long distances.

It is important to understand that distance education should be like a system that enables quality of knowledge and access to education, besides contributing to the democratization of knowledge. In other countries, this method has won its performance space and recognition for its quality and methodological innovation in addition to being regarded as the education of the future, in the societies mediated by information processes and technology [33].

When thinking about quality, we should consider evaluation methodologies consistent with this new reality. According to Carlini and Ramos, the concept of evaluation is understood through the following aspects: diagnosis, training and somatization, and practice that seeks to understand, improve, qualify and quantify the processes of teaching and learning thus giving them unique meanings and helping in taking new decisions, whether in in-classroom education or in virtual education [6].

In the technological age, where changes are so accelerated, knowledge management becomes critical to maintaining a competitive advantage in the market. Authors in references [10, 11, 34, 13, 35] state that companies have felt the need to develop their own educational systems geared to meet market needs, as well as to improve their relations with employees, customers, suppliers and the community in general. Due to this phenomenon, organizations have invested

in the formation of the profile of future professionals, providing them with continuous learning opportunities and the development of attitudes, skills and abilities beyond the concern with theoretical knowledge.

Some time ago, companies began to realize that their greatest competitive advantage was at the level of training, knowledge and commitment of the entire team, including customers and suppliers. That said, it is observed that the effective validity of university undergraduates and graduate students is becoming increasingly reduced; that is, if the employee does not stay permanently updated, he will be outdated in a short time, even with a "suitable" title.

Thus, Vilas Boas believes that traditional training programs no longer meet the training needs and updated knowledge is required by market dynamics [10]. As a result, organizations face a competitive environment and seek in the lifelong learning process a way to build a competitive business intelligence that can proactively respond to the demands of the globalized world.

In this context, this study seeks to make a theoretical and practical analysis of distance education as an innovative element in the educational model, highlighting this mode as a resource of people's training and improvement in the business environment.

It is indisputable that in Brazil distance education is booming and has established itself, especially at university level. Some of the main reasons for this rapid growth are the repressed demand of not attended students, mainly for economic reasons, flexibility of time to attend in-classroom courses and geographical access to learning places. Another relevant aspect is that education for work is considered by many people as the best way to promote greater social equity and reduce the differences in constant competition for a place in the labor market [36].

Therefore, it is essential to improve the process of evaluation of distance education systems in Brazil and elsewhere. In addition to its wide dissemination in the country and its social and economic impact, EAD is a relatively new methodology that must be remodeled to suit the different needs of students and the market. It is also necessary to have a rigorous process of evaluation and improvement of techniques and methodologies adopted in distance education courses, just to provide credibility and recognition to this modality of education in the country as in references [27, 28, 15, 16, 17].

2.2. Contextualizing distance education in Brazil

The history of distance education in Brazil, and in the world, is not new. Brazil has nearly a century of experience. Over the years, it was not only successes and recognitions that have marked its existence. Probably, the first experiences in distance education in Brazil have been unregistered, since the first known data belong to the twentieth century.

It appears that since the 1970s there have been attempts to systematize the experience in distance education in Brazil, which effectively are not solidified because of government intervention, at the time of the military regime. With the transition to democracy in the 1980s, distance education had been overlooked and forgotten, because there were political differences about the projects and programs developed by the government. However, the 1990s saw a growing need for continuous and permanent education, as well as a debate on technological

advances, which obviously made distance education emerge as a real opportunity to expand the education for the entire population, especially those who were outside of the traditional educational system [37].

For these reasons, it is relevant to highlight that between the 1970s and 1980s, private foundations and non-governmental organizations have initiated the provision of distance supplementary courses, at tele-education model, with satellite classes, supplemented by printed materials. This practice marked the arrival of the second generation of distance education in the country. It is also noteworthy that only in the 1990s the majority of Brazilian higher education institutions mobilized for distance education using new communication and information technologies. A study carried out by Chang and Smith showed that when information on the organization and operation of courses and programs in distance education are more transparent, and the students are more conscious about their rights, duties and skills, the experience of distance education will be more profitable for Brazilian students. Apart from that, they observed that the greater the credibility of the institutions, the better would be the experiences in distance education [38].

The enrichment of distance education came only with the Law number 9394/96 – Law of Guidelines and Bases of National Education, which included EAD in the education system and recognized it as a legitimate educational modality of the education system in Brazil. Even then, many misconceptions regarding this type of education still remain, hindering its enrichment and recognition as a specific field of information and as a specific and unique methodology of education [37].

According to a survey conducted by the Brazilian Statistical Yearbook of Open Education and Distance Learning (ABRAEAD), in its edition of 2008, more than 2.5 million Brazilians studied in courses with distance methodologies, in 2007, in the country. The data do not only include students in institutions of courses accredited by the education system but also large projects of regional or national importance, such as Bradesco Foundation, Roberto Marinho Foundation and the Group S (SESI, SENAI, SENAC, SEBRAE, etc) [1].

Several studies and researches on distance education have become increasingly important on the world stage. In Brazil, we can highlight some authors who are investigating the institutions that practice this type of education by methods that assess their skills, including [31, 4-10, 15-17, 39].

The development of distance education in Brazil, as well as in the world, is due to the technological growth of the media. It had moments of success as well as failures and resistance that remains nowadays in some countries. Some people maintain very large bias within distance education. Thus, researchers who believe that distance education is suitable to attend special needs fight to highlight its place in the education system. In this context, studies about the quality of distance education courses are gaining value in this sector.

2.3. Quality in distance education

Distance education has been consolidated as an important alternative to capacitate students in Brazil. It is worth noting that according to Abraead, there are 2,504,483 students officially

enrolled in distance education, comprising all forms of distance education offered in the country. Specifically, among graduate students, there are 813,550 students registered in undergraduate courses [1].

Comparing the number of places in higher education in Brazil from 2003 to 2010, we can see clearly the role of distance education in the volume of places offered. It presents a strong growth over the years, even though it is notable that there is still a very long way to go and many spaces to be filled, as shown in Table 1. The number of students enrolled in distance education has grown from 49,911 students in 2003 to 930,179 students in 2010.

Year	In-classroom Students	Growth %	Students EAD	Growth %	Total
2003	3,887,022	11.7	49,911	22.6	3,936,933
2004	4,163,733	7.1	59,611	19.4	4,223,244
2005	4,453,156	7.0	114,642	92.3	4,567,798
2006	4,676,646	5.0	207,206	90.7	4,883,852
2007	4,880,381	4.4	369,766	78.5	5,250,147
2008	5,080,056	4.1	727,961	96.9	5,808,017
2009	5,115,896	0.7	838,125	15.1	5,954,021
2010	5,449,120	6.45	930,179	10.9	6,379,299

Source: In reference [40]

Table 1. Growth of in-classroom education × growth of distance education

According to data from Abraead, the average age of distance education students compared to students in in-classroom courses is seven years higher, and their age group corresponds to the range of 30–40-years-old. These kinds of students require special attention in order to get their attention to learn in this special mode [1].

Thus, it is essential to define a pedagogical approach to attend to those students and to assure quality of a distance course. There are many special features to be observed, as pointed out by Vilas Boas, Hamtini, Ferreira and Furtado. This pedagogical approach is a kind of guideline that determines since the planning of the course and its operation until the grasp of the objectives, represented by the presentation of content, the role played by its participants, the forms of interaction between them and the assessment of learning. The focus should be on the quality of material and in the fulfillment of the complexity of current educational setting [17].

Regarding distance education courses, they have shown over the years a functionalist approach, with presentation of content in modules, use of tutorials and objective assessments. In fact, an attempt to replicate the classroom model. However, in education as a whole, new concepts have been adopted as alternative models to explain the acquisition of knowledge, among them cognitive and interactionist theories – constructivism and social cognition, for

example. They are looking for learning as a process of knowledge construction departing from critical reflections involving the active participation of the student, who must learn by interacting with the environment and with other components of the communities to which they belong.

Thus, studies and researches are being implemented by EAD proposals to adapt to the new reality. Nowadays, it is easy to have technological resources that facilitate communication and interaction. This technology brings new experiences from the perspective of distance and time, improving presentation of courses, the role of educators and learners, and the use of new forms of communication to compensate for the absence of physical contact. In addition to this, participation and evaluation can be reformulated to meet the dialectic of teaching and learning at a distance. The proposal for active learning is only possible in environments that generate interaction, collaboration, knowledge production and the possibility of customization or personalization of education. These aspects are directly related to constructivist, reflective, collaborative and interactivist theories that enable autonomous learning processes.

The concept of distance education is related to different situations, its features have more to do with historical, political and social circumstances than with the very type of education itself. These conditions, according to Pimentel, mean that there is a dizzying development of Information and Communication Technologies (ICT), mediated with satellites transmissions, Internet and multimedia material. So many variables contributed also to diversify the definitions of what is meant by EAD [12].

Cooperative work facilitates group learning and allows the creation of a deeper knowledge. According to Palloff and Pratt, the development of cooperation requires an environment and an appropriate way to study with the following features: (a) enable student groups to formulate a common goal for your learning process; (b) encourage students to make use of problems, special interests and personal experiences as a resource for motivation; and (c) take the dialogue as a fundamental tool of investigation, as in reference [2].

Collaborative learning development process begins with a plan that would lead to the formulation of a community that glimpses a common goal for learning. One of the steps to increase collaboration in educational processes would be proposing activities that enable students to associate everyday life to the problems presented in the course. Offering students the opportunity to explore and relate their personal experiences in working groups can become an important feature to stimulate participation and discussion related to the subjects they are studying. In this collaborative approach, the course pedagogical program directs the activities submitted to the groups, valuing the collective construction, individual knowledge and the application of this in contexts brought by students to contribute to the solution of the problem.

All these efforts towards the distance education allowed an evolution in educational applications, providing countless possibilities, with the convergence of different media technologies, hypertext, online video conferences and wireless technology, leading to many different pedagogical solutions. The resulting software ranges from solutions developed by specific university trainings to corporate integrated solutions packages, which are ready for the development of courses, and tools that can be coupled to other software and environments

that provide support to various stages of the educational process. In fact, the biggest concern is not the technological product itself, but the pedagogical proposal of the institution that should be focused on the student and his learning procedure.

Distance education mediated by the internet, that is, an education with its own characteristics, possibilities and risks, has a number of challenges to be overcome in the pursuit of quality education. Initially, we emphasize the need for infrastructure, comprising software, hardware and telecommunication technology. These can be provided by the school itself or through its poles, or even provided by the student himself. However, there is in addition the need for easy handling, as pointed by Palloff and Pratt in [2]. In addition to this, there are the pedagogical level of challenges. Klering, Guadagnin and Biancamano point out some challenges to be overcome for successful distance education, as in [42]:

a. Need for attractiveness of content: due to greater autonomy of students in distance education, it is necessary that the content and materials should be of more interest to them to achieve a suitable performance;

b. Spirit of community: "to intensify the interaction between people with common interests, the virtual community tends [...] to lead to dissemination and knowledge generation and strengthen cooperation in the search for satisfaction of needs and objectives" [42, p.5]. This is the collective knowledge creation, only possible to the extent that there is involvement of students among each other. This integration between students should be encouraged by teachers and tutors and by the proper distance education system;

c. Development of an own cultural code: This code is necessary for the proper consolidation of the community spirit and a sense of belonging to an exclusive group;

d. Evaluation as a learning tool: the assessment should consider the rhythm of the students, allowing them to reach proposed goals. Thus, there is a need to assess to what extent the challenges that EAD brings have been overcome nowadays.

In this context, it is important to consider the roles of human resources team in providing adequate infrastructure and training to guarantee quality in distance education projects. These projects can be addressed to schools or universities, or companies.

2.4. Human resources management and employee's qualification

Binotto and Nakayama, in reference [43], explains that until the 1960s, human resources management in companies received simply the name of "personnel department" and "industrial relations", assuming a limited role of bookkeeping and records. With the evolution of administrative theories, the advent of the Theory of Human Relations, and with also the improvement of the theories of organizational behavior, human resources management started to move towards activities such as selection, definition of positions and salaries, training, benefits and social work.

Nowadays, human resources management tends to align itself more with the organizational strategy and to focus simultaneously on the internal customer (employee) and external costumer (market), as in [34, 13, 35, 44, 45]. In this context, most researchers and managers

prefer to call it as people management. For this reason, a transition of the human resources management from a "department" to a "business unit" is observed. The results must be observed far beyond cost reduction and optimization of employee management activities. In other words, human resources management or people management starts to produce both operational results as well as knowledge within the organization. Consequently, the companies are able to convert these results into financial resources.

People management in organizational environment has become the object of study and practical performance, more and more intense. This statement stems from the typical phenomenon of this time such as globalization, outsourcing and new business models. Besides, managers are witnessing a time where technology development and the increasing industrial automation has caused significant changes to organizations, therefore demanding a constant qualification of its workforce [46].

Professional qualification delivers results for individuals, and consequently it will lead to gains for the organization. This qualification can occur both as in-the-job training or out-of-the-job training. According to Esi, educational activities are characterized as operating strategy in the pursuit of quality and productivity in organizational environment [47]. As a result, it enhances versatility, enrichment of tasks and increases employees' responsibility.

Human learning in organizations is divided into two major groups: the natural learning, which is configured by trial and error and the induced learning, which is obtained through carefully planned and structured situations [48].

An important aspect is that qualification involves at least three social actors: government, workers and businesses. So far, government qualification provides a way to ensure the productivity and competitiveness of the country itself, for workers qualification brings a strengthening of their autonomy and self-worth, and for companies that practice is associated with productivity and their own survival [10-11].

2.5. The new roles of human resources and distance education

Currently, human resources management tends to remodel, aiming to respond to the new challenges posed by the globalized world. There is also the tendency of aligning themselves more with the organizational strategy and to focus simultaneously on the internal (employee) and external costumers (market).

Then occurs a transition of human resources management from the "department" to the "business unit". The results must be observed far beyond cost reduction and optimization of employee management activities. In other words, HR starts to produce both operating results as well as knowledge across the organization, and consequently these results that become financial resources.

Ulrich, in reference [49], advocates that in a company, the current HR task is to achieve organizational excellence. Thus, HR has to assume a new role, focusing on results and not the traditional activities of HR, such as hiring and remuneration. According to the same author, "this sector should not be defined by what it does, but for what it is – results that enrich the company's value for customers, investors and employees" [49, pp.35–36].

Consequently, all of these changes in HR have influenced Training and Development processes (T&D) in businesses. Odenwald and Matheny, in reference [50], explain that the future of the business world trends is reflected even in the terminology, which is now adopted with respect to the development of human resources, such as control for autonomy, supervisor for mentor, competition for collaboration, matrix by network, provider for helpmate and driving by facilitation.

In this context of change, different factors led organizations and individuals to opt for distance education courses in order to keep update and attend market's requirements. On one hand, the inability of the student to have access to classroom teaching due to downtime or costs required to attend traditional classrooms or even the imposition of being constantly updated to meet the labor market requirements. On the other, companies that cannot dispense their employees for daytime training and companies in need of reducing training costs and qualification for many reasons. In response to these needs, not only the educational institutions have been offering this type of education as an alternative to personnel training, as well as the organizations themselves, seeking to qualify employees without interruption at work [35].

Thus, Carnoy emphasizes the importance of educational institutions as sources of knowledge transmission, and because they can also re-insert individuals in new companies built with high information technology [51].

3. Methodology

Companies of the industrial sector of Minas Gerais that have control over the academic training of their professionals were defined as the object of study. This choice is due to the importance this segment has on the state's economy and consequently, the role this state has on the country. According to the objectives of this study, we choose to perform a research divided into two distinct phases. Firstly, we performed semi-structured interviews with 12 human resource managers of small, medium and large industries. These interviews were carried on from August to September 2011. This number was established when it was observed the interruption of the marginal contribution of the interviews. That is, the interviews from this point did not contribute with more relevant information.

The first part of this work is qualitative; therefore, semi-structured interviews were conducted to establish a better interaction with the theme and research problem in order to gather more information that complement the quantitative method. The qualitative method, in turn, has characteristics of an exploratory study that are designed to increase knowledge about a particular problem. According to Triviños, this type of research, apparently simple, explores the reality seeking greater knowledge that allows planning a descriptive research in the sequence to deepen the knowledge about the subject under study [52].

For Triviños, in reference [52, p.146], semi-structured interview is characterized by basic questions that are supported by theories and hypotheses that are related to the subject of research. The questions bear fruit to new hypotheses arising from the responses of informants. The main focus would be placed by the researcher–interviewer.

The second part of the study relied on quantitative method characterized by a "survey". Thus, this descriptive research seeks to know more about the reality under study, their characteristics and their problems. Survey helps to accurately describe the facts and given reality of a phenomena [52].

The population for this research consists of 18.591 industries characterized according to the methodology of the Brazilian Institute of Geography and Statistics – IBGE, as small, medium and large industries, in the state of Minas Gerais. Survey respondents were made of human resource managers of these industrial organizations with more than 10 employees. They were asked to inform if these companies employ undergraduate students. From this universe, we got a sum total of 377 questionnaires answered through Google Docs. Data were collected from October 2011 to January 2012. The answers of the quantitative research were submitted to descriptive analysis.

4. Results and discussion

4.1. Profile of human resource managers and their organizations

Subsequently, in the semi-structured interviews we interviewed 377 human resource managers of industries in order to expand the analysis performed in the group of twelve interviews to a larger number of respondents, thus allowing statistical inferences to the population. Consequently, the interviews allowed us to raise the profile of managers of industrial organizations from the state of Minas Gerais.

To assess the profile of the current human resource managers of industrial organizations is crucial to characterize the scenario of people management policies, so it is important to have a panel about the age of the current human resource managers as shown in Table 2. We may observe that 52% of the managers have undergraduation degree or post-graduation degree. It is worth to mention that 6.6% of them did not finish high school or intermediate level of education yet.

	Frequency	%	% Total
Incomplete high school	25	6.6	6.6
Complete high school	74	19.6	26.3
Incomplete college	82	21.8	48.0
Undergraduate	98	26.0	74.0
Postgraduate	98	26.0	100.0

Source: Research data

Table 2. Managers' educational level

Table 3 shows the time managers are on their positions. We may observe that 54.4% of the respondents have less than 5 years in function. Another relevant fact is that there is a very

significant number of managers (32.6%) between 11 and 20 years in function, this shows stability in the company and job.

	Frequency	%	% Total
Up to 3 years	18	4.8	4.8
3 to 5 years	187	49.6	54.4
6 to 10 years	49	13.0	67.4
11 to 20 years	123	32.6	100.0
More than 21 years	0	0.0	100.0

Source: Research data

Table 3. Managers' time working in that industry

The respondents are up to 40-years-old in 67.4% of the cases, but the largest group of respondents are between 31 and 40-years-old, as shown in Table 4. Only 6.6% of the managers are older than 51 years.

Age	Frequency	%	% Total
Up to 20-years-old	0	0.0	0.0
21 to 30-years-old	107	28.4	28.4
31 to 40-years-old	147	39.0	67.4
41 to 50-years-old	98	26.0	93.4
More than 51-years-old	25	6.6	100

Source: Research data

Table 4. Age of the human resource managers

It is important to notice that in the age group from 31 to 40, we found more managers (18%) still taking their undergradution, as shown in Table 5. However, among the managers from 21 to 30-years-old, we found out that 14.3% of them already have their undergraduation degree. We can infer that some of these managers are studying at distance courses and we may say that nowadays many professionals are having more access to formal education than people used to have in the past. It can be also supported by data in the same table showing that among managers over 51-years-old, only 2.2% of them are undergraduates or are still studying.

From the point of view of the size of the organizations, according to IBGE definition, we observe that 47.7% of the organizations are small industries, as they have 11–50 employees (Table 6). Following the same definition, we have 39.3% of medium-sized industries, of 51–250 employees and 13% of large industries, over 251 employees.

Age	Incomplete High school	High school	%	Undergraduate	Post Graduate
Up to 20-years-old	0.0%	0.0%	0.0	0.0%	0.0%
21 to 30-years-old	0.0%	0.0%	2.7	14.3%	11.4%
31 to 40-years-old	0.0%	4.2%	18.0	6.6%	10.1%
41 to 50-years-old	4.2%	14.9%	0.8	3.2%	2.9%
More than 51-years-old	2.4%	0.5%	0.3	1.9%	1.6%

Source: Research data

Table 5. Age of the HR managers × educational level

	Frequency	%	% Total
Between 11 and 30 employees	25	6.6	6.6
Between 31 and 50 employees	155	41.1	47.7
Between 51 and 99 employees	123	32.7	80.4
Between 100 and 250 employees	25	6.6	87.0
More than 251 employees	49	13.0	100.0

Source: Research data

Table 6. Size of the organizations

Within the division of the activities of the responding organizations, there is a predominance of industries related to food production, beverages and tobacco (30%), as shown in Table 7. The textile sector is the second sector represented by 24.9% of the companies surveyed. In sequence comes automotive industries and transport of materials, the mining industries, metallurgic and fuel industries.

	Frequency	%	% Total
Mining	23	6.1	6.1
Food, beverage and tobacco	113	30.0	36.1
Textile	94	24.9	61.0
Fuels	19	5.0	66.0
Metallurgy	34	9.0	75.0
Automotive and transport	41	10.9	85.9
Other Industries	53	14.1	100.0

Source: Research data

Table 7. Economic sector of the industries from Minas Gerais

Regarding the regions of the state of Minas Gerais, it is observed that the central region of the state of Minas Gerais have the biggest number of industries in this sample (Table 8). In the sequence comes west region with 21.8% of the industries. Central region has also the highest scores of formal education with 11.9% of managers still carrying on their undergraduate courses and 11.1% already graduated. However, we can see that west region has the highest score of managers with post-graduation degree.

Age	Frequency	%	Inc. High School	High School	Incomplete College	Undergraduate	Post-Graduate
South region	49	13.0	0.3%	3.7%	1.3%	4.5%	3.2%
East region	49	13.0	1.3%	3.2%	3.2%	3.7%	1.6%
North region	49	13.0	4.0%	5.0%	2.1%	1.3%	0.5%
Central region	148	39.2	0.8%	5.8%	11.9%	11.1%	9.5%
West region	82	21.8	0.3%	1.9%	3.2%	5.3%	11.1%

Source: Research data

Table 8. Region of the organizational industries × managers' educational level

The human resource managers interviewed indicate that higher education institutions located in the region where the industries operate meet partially the company's needs for 39% of respondents, as shown in Table 9. Another 34.7% stated that regional educational institutions do not meet their professional needs. Only 26.3% of the respondents said regional institutions meet well their professional needs. This shows that regional universities should look better for their courses in order to meet industries' requirements. It is probably related to the quality and kind of courses offered.

	Frequency	%	% Total
Partially yes	147	39.0	39.0
Yes	99	26.3	65.3
No	131	34.7	100.0

Source: Research data

Table 9. Superior educational institutions from Minas Gerais meet industrial needs

4.2. Mapping the graduates' skill and characteristics

According to the respondents, one of the skills observed in undergraduate employees is integration in the market. Table 10 shows that 44.8% of the managers stated that the level of integration of the graduate employees is suitable. However, 22.3% mentioned that their forms

of integration in the company is very good. According to Vilas Boas, the qualification provides conditions to ensure productivity and competitiveness of workers, and therefore for their organizations, since qualification strength their own autonomy and self-worth, as in reference [10]. For companies, this practice is associated with their productivity and own survival.

	Frequency	%	% Total
Too bad	0	0.0	0.0
Bad	25	6.6	6.6
Indifferent	99	26.3	32.9
Good	169	44.8	77.7
Very good	84	22.3	100.0

Source: Research data

Table 10. Graduates' integration on the job

When questioned about the productivity of undergraduates, it appears that there is a prevalence of 64.5% of positive points of view; however, 13.3% of managers pointed out that productivity of undergraduates is not good, as shown in Table 11. This information about the productivity is supported by the information collected in semi-structured interviews where some respondents have mentioned the issues of low productivity of the new professionals.

	Frequency	%	% Total
Too bad	0	0.0	0
Bad	50	13.3	13.3
Indifferent	84	22.3	35.5
Good	193	51.2	86.7
Very good	50	13.3	100.0

Source: Research data

Table 11. Graduates' productivity

Productivity refers to the greater or lesser use of resources in the production process where raw materials are combined to provide an output, that is, how much one company can produce with limited resources. According to Megginson, Mosley and Pietri Jr. "Productivity is the amount of goods or services produced by an employee in a given period of time, taking quality into account." [53, p.534] Thus, an increase in productivity leads to a better use of employees, machinery, energy, fuels, raw materials, among others.

Given the above, it can be seen in Table 12 that motivation has the same characteristics as the understanding of the tasks where there is a high prevalence of positive assessment (65.8%) in this sample. Only 5.3% of the respondents pointed out that the level of motivation of the new employees is bad.

	Frequency	%	% Total
Too bad	0	0.0	0.0
Bad	20	5.3	5.3
Indifferent	109	28.9	34.2
Good	174	46.2	80.4
Very good	74	19.6	100.0
Source: Research data			

Table 12. Graduates' motivation

According to Table 13, the skills of understanding tasks was appointed as indifferent by almost half of the interviewed managers (48.8%). It meets the speeches of the managers interviewed in the first phase of this research. Work activity synthesizes and integrates different factors structuring work process [54]. Thus, in real work situation, the activities give visibility to the determinants that affect their interaction with the environment and motivate people.

	Frequency	%	% Total
Too bad	0	0.0	0.0
Bad	25	6.6	6.6
Indifferent	184	48.8	55.4
Good	118	31.3	86.7
Very good	50	13.3	100.0
Source: Research data			

Table 13. Graduates' task comprehension

4.3. Comparison between classroom and EAD graduates

In order to compare the perception of human resource managers regarding quality features of students' in-classroom courses and distance courses, we asked them to choose the options in a specific scale about quality features of undergraduate students as shown on tables 14, 15, 16, 17, 18 and 19. More information on these results can be seen in reference [39]. It can also be related to information in previous literature about distance education and e-Learning as in [3, 8, 10, 11, 17, 21, 22, 25, 30, 34, 48, 50, 55]. When it comes to the ability to deal with information

technology, 75.3% of respondents pointed out predominance of the distance courses in relation to classroom courses, as shown in Table 14. This result is justified by the intense interaction with the technological tools used in distance courses.

	Frequency	%	% Total
Slightly favorable to classroom courses	0	0.0	0.0
Favorable to classroom courses	23	6.1	6.1
Indifferent	70	18.6	24.7
Slightly favorable to distance courses	215	57.0	81.7
Favorable to distance courses	69	18.3	100.0

Source: Research data

Table 14. Comparison between ability to deal with information technology

Managers were asked to compare the quality of job performed by graduates from in-class courses and distance courses. Table 15 shows that 36.1% of the managers stated that graduates from in-class courses perform better their job. On the other hand, 34.7% of them said graduates from distance education courses perform better their job. The difference between the two groups is very short and not significant statistically. In addition, almost one third of the respondents are indifferent to this issue.

	Frequency	%	% Total
Slightly favorable to classroom courses	81	21.5	21.5
Favorable to classroom courses	55	14.6	36.1
Indifferent	110	29.2	65.3
Slightly favorable to distance courses	69	18.3	83.6
Favorable to distance courses	62	16.4	100.0

Source: Research data

Table 15. Comparison regarding the quality of the job performed by graduates

Association between theory and practice by graduates is extremely important for industrial organizations. Regarding this attribute, the respondents stated they are favorable (46.4%) to graduates from distance education courses, as shown in Table 16. Thus, this is a useful indicator of the quality for distance education courses. Consequently, when industries invest in adoption of new equipment and mechanisms that require application of theory in practice, they may relay well on graduates of distance education programs. On the other hand, 41.2% are favorable to in-classroom courses for the association between theory and practice.

	Frequency	%	% Total
Slightly favorable to classroom courses	73	19.4	19.4
Favorable to classroom courses	82	21.8	41.1
Indifferent	47	12.5	53.6
Slightly favorable to distance courses	117	31.0	84.6
Favorable to distance courses	58	15.4	100.0

Source: Research data

Table 16. Comparison between association of theory and practice

Table 17 presents the comparison regarding the actuality of learned content. According to this table, both in-class courses and distance courses are both updated in terms of the content they offer to their students. However, there is 24.4% of managers who did not know well to inform, it is because they marked indifferent to this question.

	Frequency	%	% Total
Slightly favorable to classroom courses	61	16.2	16.2
Favorable to classroom courses	83	22.0	38.2
Indifferent	92	24.4	62.6
Slightly favorable to distance courses	95	25.2	87.8
Favorable to distance courses	46	12.2	100.0

Source: Research data

Table 17. Comparison regarding update of learned content

Regarding responsibility of the graduates of distance education courses and in-class courses, 67.4% of managers are favorable to distance courses (Table 18). This result indicates that by requiring a straight discipline to the conclusion of the courses, distance education provides further development of the issues related to individual responsibility. It is relevant to mention that discipline and responsibility to follow the activities and study to achieve suitable results are essential to this kind of course, but it also brings this quality feature regarding the degree of responsibility of the graduates from this kind of education.

	Frequency	%	% Total
Slightly favorable to classroom courses	33	8.8	8.8
Favorable to classroom courses	33	8.8	17.5
Indifferent	57	15.1	32.6
Slightly favorable to distance courses	172	45.6	78.2
Favorable to distance courses	82	21.8	100.0

Source: Research data

Table 18. Comparison in terms of graduates' responsiblity

When comparing the models of in-class and distance courses for the development of skills related to leadership, we observed that the regular courses present a large advantage over distance courses. In this case, managers informed that the development of leadership in in-class courses is better in 54.9% of the cases (Table 19). On the other hand, 31.6% of the managers stated that graduates from distance courses are more skillful on leadership. In this case, closest physical contact may enhance the development of leadership.

	Frequency	%	% Total
Slightly favorable to classroom courses	73	19.4	19.4
Favorable to classroom courses	134	35.5	54.9
Indifferent	51	13.5	65.4
Slightly favorable to distance courses	49	13.0	88.4
Favorable to distance courses	70	18.6	100.0

Source: Research data

Table 19. Comparison between in-classroom and distance courses regarding leadership

Contributions from superior education institutions (IESs) can still be materialized by the transfer of trained personnel to companies and research institutes through agreements of technical cooperation and use of laboratories and library collections [56]. Therefore, this set of relationships replaces IESs in the center of the competitive dynamics of industry while playing a key role in sustaining the flow of innovations. For this reason, we asked industrial managers their opinions about the services offered by regional IESs to meet industrial needs in the region of the respondents, as in the main study, in reference [39].

According to the results shown in Table 20, the majority of the respondents stated they attend their needs partly (41.6%). Only 23.6% of the managers said IESs from Minas Gerais attend their employees' needs. This is an important general overview about the quality of courses and kind of courses offered in the region. A total of 34.7% of the respondents pointed out that superior education institutions do not attend their needs. It means educational institutions should get closer to industrial managers to know their needs and make strategies to invest in new courses or new models of teaching.

Region	No	Partly yes	Yes	Total
South	2.1%	7.7%	3.2%	13.0%
East	2.9%	5.0%	5.0%	13.0%
North	9.0%	3.2%	0.8%	13.0%
Central	11.9%	20.2%	7.2%	39.3%
West	8.8%	5.6%	7.4%	21.8%
Total	34.7%	41.6%	23.6%	100.0%

Source: Research data

Table 20. IESs from Minas Gerais meet industrial needs

5. Final considerations

This study aims to assess the perception of human resource managers regarding the quality of distance undergraduate courses. In search of a broader understanding of this phenomenon, we sought to characterize the managers from Minas Gerais industries and the industries of this state to map the most relevant attributes and the main differences between graduates attending in-classroom courses and distance courses. To achieve these purposes, we used a semi-structured interview with 12 managers and a survey with 377 managers from industries based in the state of Minas Gerais. The interviews allowed the researchers to construct the questionnaire and offered some relevant information to the whole research.

We observed that the development of a teaching and learning model does not necessarily exclude the other model, thus it is concluded that the challenge of human resource managers is to get the most of their graduates regarding the positive aspects of each modality. On the other hand, universities may use this information to improve the quality of their courses and even amplify their profile of courses, in both modalities of undergraduate courses.

According to the results, in-class and distance course lack practical application of learned knowledge, since many of the graduated students arrive, in the market, with few work experiences. However, this situation is more easily bypassed by graduated students from distance courses, because most of them belong to a older age group and many of them are already in the market when they attend undergraduate distance courses. This is an important feature regarding the quality of formal education.

In addition to this, we noticed that industrial managers pointed out responsibility as one of the most important characteristics of graduates from distance courses. According to these managers, graduates from distance courses are also better to associate theory and practice and to deal with modern technology. Although, they pointed out that graduates from in-classroom courses are better in terms of leadership. This conclusion proves that distance courses have to find a form of improving leadership skills on their students because leadership is an important issue regarding human resource managers and their organizations.

To sum up, we would like to suggest that new researches on this subject includes samples from other states. It is also important to consider analyzing the perception of managers from other economic sectors. The collection of more qualitative data is also relevant to have deeper perception about the good and bad sides of these two educational modalities. This research agenda can be seen as an attempt to deepen the knowledge about the use of distance education as an instrument of human resource managers. It is because industries can be directly beneficiated with qualification that their employees carry on through formal in-classroom and distance education.

We also suggest that new studies compare the performance of the same group of employees before and after attending undergraduate courses, since this study did not analyze quality education features in this perspective. Otherwise, it can be done in the first semester that some specific employees start in-classroom or distance undergraduate courses and in the first semester they graduate.

Author details

Ana Alice Vilas Boas* and Gustavo Henrique Nogueira de Andrade

*Address all correspondence to: ana.alice2006@yahoo.com

The Federal University of Lavras, Brazil

References

[1] ABRAEAD – Anuário Brasileiro Estatístico de Educação Aberta e a Distância. São Paulo: Instituto Monitor, 2008.

[2] Palloff RM, Pratt K. O aluno virtual: um guia para trabalhar com estudantes on-line. Porto Alegre: ArtMed, 2005.

[3] Bastos AVB. Trabalho e qualificação: questões conceituais e desafios postos pelo cenário de reestruturação produtiva. In: Borges-Andrade JE, Abbad G, Mourão L. (Orgs.) Treinamento, desenvolvimento e educação em organizações e trabalho: fundamentos para a gestão de pessoas (pp.23–40). Porto Alegre: Artmed. 2006.

[4] Bielschowsky CE. Educação superior a distância: uma estratégia para avaliação institucional. In: Desafios da educação a distância na formação de professores. Brasília: Secretaria de Educação a Distância, 2006. 237 p

[5] Moran JM. Avaliação do Ensino Superior a Distância no Brasil. São Paulo, ECA/USP 2007. Disponível em <http://www.eca.usp.br/prof/moran/avaliacao.htm>. Acesso em 20 de ago. de 2009.

[6] Carlini AL, Ramos MP. A avaliação do curso. In: Litto FM, Formiga MMM. (Orgs). Educação a distância: o estado da arte. São Paulo: Pearson Education do Brasil, 2009.

[7] Queiroz VC. Avaliando a EAD. EAD, Unicamp. Revista Digital. March 2003.

[8] Neves CMC. Referenciais de qualidade para cursos à distância. Ministério da Educação, Secretaria de Educação a Distância. 2003.

[9] Rodrigues R. Modelo de avaliação para cursos no ensino a distância: estrutura, aplicação e avaliação. Florianópolis. Dissertação (Mestrado em Engenharia de Produção) – Universidade Federal de Santa Catarina. 1998.

[10] Vilas Boas AA. EaD e Gestão do Conhecimento: A Experiência no Ambiente Empresarial. In: 12º CIED – Congresso Internacional de Educação a Distância, Florianópolis – SC. 12º CIED – Congresso Internacional de Educação a Distância, 2006.

[11] Vilas Boas AA, Martins LRV, Oliveira G de J Meeting Expectations in Higher Degree Programmes through Education at Distance: a new paradigm for rural sector. *ECHAE CZU, Prague, Tchech Republic. 2006*.

[12] Pimentel NM. Educação a distância. Florianópolis: SEAD/UFSC, 2006. 142p.

[13] Oliveira G de J, Trinta Z, Vilas Boas AA EAD x UAB: um processo de formação continuada dos profissionais da educação. In: Anais do 4th International Conference on Information System and Technology Management, Sao Paulo: USP, 2007.

[14] Vilas Boas AA, Oliveira G de J. Distance Education and the Brazilian Open University. In: 4th International Conference on Social and Organizational Informatics and Cybernetics, 2008, Orlando - Florida. Proceedings of the 2nd International Multiconference on Society, Cybernetics and Informatics, 2008.

[15] Vilas Boas A A, Silva SA, Oliveira G de J O Processo de Construção do Portal de Ensino do Exército Brasileiro. In: Anais do 6th International Conference on Information Systems and Technology Management, São Paulo: USP, 2009.

[16] Vilas Boas AA, Andrade GHN De, Hamtini TJ, Sousa SA de. Tutors and University Teachers' Perception about Quality Assurance in Distance Education: the case of the Undergraduate Management Course in Minas Gerais – Brazil. In: IEEE EDUCON 2011 – Learning Environments and ecosystems in Engineering Education, 2011, Amman – Jordan. Proceedings of the IEEE EDUCON 2011. IEEE Education Society: Amman, 2011;1:1–7.

[17] Vilas Boas AA, Hamtini TJ, Ferreira PA, Furtado RPM. Quality assurance in distance education in Brazil. In: Muyinda PB. (Org.) Distance Education. 1ed. Croatia: InTech, 2012; 1:157–80.

[18] O'Malley J, McCraw H. Students' perceptions of distance learning, online learning, and the traditional classroom. Online J Distance Learning Administration, 2010;2(4). Retrieved on October 11.

[19] Phipps R, Merisotis J. Quality on the line: Benchmarks for success in Internet-based distance education. Blackboard and National Education Association. 2000.

[20] Peters L. Through the looking glass: student perceptions of online learning. The Technology Source 5(5): 2001.

[21] Young K. The effective deployment of e-learning. Industrial and Commercial Training 2001;33(1):5–11.

[22] Rosenberg M. E-learning: estratégia para a transmissão do conhecimento na era digital. São Paulo: Makron Books, 2002.

[23] Jurczyyk J, Benson SNK, Savery JR. Measuring student perceptions in web-based courses: a standards-based approach. Online J Distance Learning Admin 2004; 7(4) 37-45.

[24] Johnston J, Killion J, Oomen J. Student satisfaction in the virtual classroom. Internet J All Health Sci Pract 3(2), 17–29, 2005. v.3.

[25] Belcheir MJ, Cucek M. Faculty perceptions of teaching distance education courses. Research Report. Boise State University Institutional Assessment Report. 2002.

[26] Willis B. Distance Education at a Glance. Series of Guides prepared by Engineering Outreach at the University of Idaho, 1996.

[27] Vilas Boas A A, Oliveira G de J, Martins N S An evaluation methodology for distance education in a regional consortium experience. Proceedings of the 1st International Conference on Technology Supported Learning & Training - Online Educa Moscow. September/October, 2007.

[28] Vilas Boas AA, Oliveira, G de J The Evolution of the Evaluation Methodology in a Regional Consortium Experience in Rio de Janeiro – Brazil. Proceedings of the 3rd International Conference on ICT for Development, Education and Training. Ghana, May 2008.

[29] Souza RP. Educação na sociedade do conhecimento. In: Fronteiras do pensamento: retratos de um mundo complexo. Org. Fernando Schüler, Gunter Axt, Juremir Machado da Silva. São Leopoldo: Ed. UNISINOS, 2008.

[30] Suga N. Educação à distância para melhoria da renda e do bem-estar social. In: O Brasil e o conflito social moderno: crescimento econômico x distribuição de renda/ Cira Souza e outros. Brasília, DF Instituto Tancredo Neves, 2001.

[31] Nunes IB. Noções de educação à distância. Revista Educação à Distância n. 5, Abr./ 1994 Brasília, Instituto Nacional de Educação a Distância, pp. 7-25

[32] Moore M, Kearsley G. Distance education: a systems view. Belmont: Wadsworth, 1996.

[33] Preti O. Educação a distância: uma prática educativa mediadora e mediatizada. Cuiabá: UFMT, 1996.

[34] Trinta Z, Oliveira G de J, Vilas Boas AA. Universidade Corporativa: uma vantagem estratégica. In: III Simpósio de Excelência em Gestão e Tecnologia, 2006, Resende. Anais do III Simpósio de Excelência em Gestão e Tecnologia, 2006.

[35] Costa Duarte, AF, Vilas Boas, AA, Capobianco, L. Preparing future EAD managers through a distance education training course. CIANTEC, Aveiro, Portugal, 2009.

[36] DIEESE - DEPARTAMENTO INTERSINDICAL DE ESTATISTICAS E ESTUDOS SÓCIO-ECONÔMICOS. A situação do mercado de trabalho em regiões metropolitanas. 2009. Disponível em: http://www.dieese.org.br Acesso 12/11/2010.

[37] Maia C, Mattar J. ABC da EaD.1 ed. São Paulo: Pearson Prentice, 2007.

[38] Chang SHH and Smith RA. "Effectiveness of personal interaction in a learner-centered paradigm distance education class based on student satisfaction." Journal of Research on Technology in Education 40.4 (2008): 407-426.

[39] Andrade GHN de. Qualidade dos Cursos de Graduação a Distância: a opinião dos gestores de recursos humanos. Dissertação, mestrado PPGA – UFLA, 2012.

[40] Vianney J. A EAD como inclusão social: O perfil socioeconômico dos alunos (2011). Disponível em <http://www.ricesu.com.br/colabora/n17/artigos/n_17/id02c.htm>. Retrieved on October 2012.

[41] Palloff RM, Pratt K. Building Learning Communities in Cyberspace. San Francisco: Jossey-Bass 1999.

[42] Klering, L. R., Guadagnin, L. A., da Rocha Biancamano, M., Kihs, M. A., & Pilla, B. S. (2004). Educação a distância para gestores locais: potencialidades e desafios. *RE-NOTE, 1*(2).

[43] Binotto E and Nakayama, MK. "Educação a distância no agronegócio sob a ótica das teorias da aprendizagem organizacional." *Distance education in agribusiness under the optics of the theories of organizational learning). Brazilian Congress of Rural Management– ABAR, Goiânia. (in Portuguese)*. 2001.

[44] Vilas Boas AA, Andrade, ROB de. Gestão Estratégica de Pessoas, Rio de Janeiro/ Elsevier/Campus 2009.

[45] Vilas Boas AA, Oliveira, G de J, Capobianco L, Hamtini TJ Open University of Brazil: a pioneer experience in training professionals in the education sector. *ECHAE CZU, Prague, Tchech Republic. 2010.*

[46] Mourão L. Oportunidades de Qualificação Profissional no Brasil: Reflexões a partir de um Panorama Quantitativo RAC, Curitiba, v. 13, n. 1, art. 8, p. 136-153, Jan./Mar. 2009

[47] ESI MC. "The education of future and the integrating dimension of the new learning technologies." *Conference proceedings of "eLearning and Software for Education" (eLSE)*. No. 01. 2011, 574-581.

[48] Abbad G, Borges-Andrade JE. Aprendizagem humana em organizações de Trabalho. In: Zanelli JC, Borges-Andrade JE, Bastos AVB (Orgs.) Psicologia, Organizações e Trabalho no Brasil (pp.237–275). Porto Alegre: Artmed.2004.

[49] Ulrich D. Recursos humanos estratégicos: novas perspectivas para os profissionais de RH. Futura, 2000.

[50] Odenwald SB and Matheny MG. Impacto global tendências mundiais em treinamento e desenvolvimento. Futura, 1996.

[51] Carnoy, M. O impacto da mundialização sobre as estratégias da reforma de educação. Mundialização e reforma da educação: o que os planejadores devem saber. Brasília: UNESCO/Brasil, 2003. p. 55-86.

[52] Triviños ANS. Introdução à pesquisa em ciências sociais: a pesquisa qualitativa em educação. São Paulo: Atlas, 1987.

[53] Megginson LC, Mosley DC and Pietri Jr PH. Administração: Conceitos e Aplicações. 4ª edição. Trad. Maria Isabel Hopp. Ed. Harbra. SP, 1998.

[54] Béguin, Pascal. "Design as a mutual learning process between users and designers." Interacting with computers 15.5 (2003): 709-730.

[55] Wentling T. e-Learning: a review of literature. Urbana-Champaign: University of Illinois, 2000.

[56] Monck JS, Letteri CA, Languis M, Dunn R. Learning Style Profile - Learning strategies of adult ESL learners in the US: a collaborative study. University of Alabama, Tuscaloosa, AL (1989) Unpublished manuscript.