ABSTRACT

Training and development is a relevant theme discussed by the Human Resources Development field. It’s relevant because it concerns to the development of the organization’s human capital, and to the improvement of performance on the company’s tasks. In the last few years we have been noticing a growth in the number of companies which have been using distance learning for training their employees. This growth is due to the improvement of technology (bandwidth, browsers etc.) and the availability of a large number of software for distance learning, like platforms, podcasts makers, video makers and so on, many of which being free. This paper aimed to discuss in a critical way the effectiveness and impact of training and development programs, considering the online, technology enhanced, model. For that, the research has a qualitative approach, which includes interviews with online courses coordinators and faculty in Brazil. In doing so, we analyzed the advantages and disadvantages for online training, such as the higher flexibility, lower costs, trainee’s pro-activity and business’ improvement (advantages) and lack of social contact and inability of studying alone (disadvantages) among others.

Key-words: corporate training; online education; performance; effectiveness

1 INTRODUCTION

Human resourcing is determinant for organizational success and that’s why it’s so relevant to train people in the companies (AZIZ; AHMAD, 2011). According to Swanson and Holton...
(2010, p.231), training “is the process of developing knowledge and expertise in people. Development is the planned growth and expansion of the knowledge and expertise of people beyond the present job requirements”.

Organizations spend large amounts of resources in training programs every year hoping to become more competitive and stronger in the market. Many of them create training programs inside the company; some (the largest ones) create Corporate Universities, others demand their employees to search and get training from recognized institutions; in both cases, it’s clear that much of the enterprises stimulate training in their human resources politics.

In the last few years we have noticed the introduction of educational technologies in training practices. But many times these initiatives are motivated by the wrong reasons, it means, many trainers choose to adopt e-learning model only because of its potential to bring economic savings, flexibility and motivation. Though distance learning really has all those advantages, the simple introduction of technology does not take the training program to a better level. In fact, a training program (traditional or e-learning) will not be effective if it does not consider the company’s needs, the learners’ characteristics and the training motivation. That’s because effectiveness concerns to the improvement of performance due to the training (acquisition of skills, concepts and attitudes) and to the benefit business and the employees receive from that training program (AZIZ; AHMAD, 2011).

Swanson and Holton (2009) present a four step method for training and development: 1) prepare the learner; 2) present instruction; 3) try out performance; 4) follow up. This method originated the ADDIE (Analysis; Design, Development, Implementation, Evaluation) model which is widely used nowadays by Human Resources Development (HRD) professionals. ADDIE model includes five phases: analyze, design, develop, implement and evaluate training programs. Usually the outcomes from training are evaluated through Kirkpatrick’s levels, which will be described in the literature review (AZIZ; AHMAD, 2011).
In this context, this paper aims to critically discuss the effectiveness of training and development programs, specially the online ones, which are becoming more popular every year and many times don’t achieve the results expected by the trainers.

2 LITERATURE REVIEW

As mentioned before, to get effectiveness, a training program should consider three main points. First, the organizations’ characteristics, it means to analyze its business needs, its goals and objectives and work systems. Second, the learner’s characteristics; it means that people are different, have different objectives and motivations and have different learn styles. These points should be considered as much as possible, for example, providing diverse kinds of training. Third, training motivation, which can be understood as that the desire of learning the content of the training and using it latter on the job to improve performance should be taken into account.

Motivation training refers to the trainee’s willingness to attend a course and use what he/she learned to improve performance on the job. Aziz and Ahmad (2011) say that learners with higher pre-training motivation have greater outcomes than that with lower pre-training motivation. Motivation affects not only the person’s desire to learn but the way they transfer knowledge and skills to practice.

Although it seems that training motivation is beyond control, since it’s strongly related to personal characteristics and objectives, Aziz and Ahmad (2011) state that training programs characteristics (TPC) influence motivation. TPCs refer to the quality of the training contents and the training environment (AZIZ; AHMAD, 2011, p.56-57) and should be considered for traditional or online programs. TPCs may be exemplified as the following ones:

- Option to attend voluntarily the training (the trainee can decide whether to attend the training program or not).
• Training reputation that refers to the expectation of the quality of the program.
• Training design that refers to the characteristics of the training environment, such as learner centered, blended courses.
• Relevance of training for the business needs, refers to the usefulness of what was learned.
• Relevance for career-related needs; training must add value to the learner’s career.
• Relevance for personal-related needs, like promotions resultant from the training, mastery of the content, better performance.

In their study of the hospitality industry, Kalargyrou and Woods (2011) found some essential competencies\(^1\) to the professionals in the 21st century. These competences are imperative for the effectiveness of training and development in any industry. They are: teamwork, inspiration-motivation, creativity, mentoring, keeping current, proactiveness, active listening, training measurement and love and passion for the profession. For them, effective training results in lower turnover and satisfied employees (KALARGYROU; WOODS, 2011).

Johnson (2003) presents nine advices to turn Corporate Universities more effective:

• Measure results to demonstrate the value of training: beyond measuring the outcomes of training it’s important to keep in mind that training does not concern only to learning but to “high impact” human performance improvement.
• Offer both traditional and online resources: in order to face the unstable business environment and to provide their employees the knowledge they need, training should mix face-to-face and online opportunities, focusing on individual and organization-wide development.
• Align corporate learning to core business strategies: the point of the training must be to achieve the company’s core business strategies.

\(^{1}\) Competency is a demonstrable characteristic that enables performance (KALARGYROU; WOODS, 2011).
• Let employees learn their own way: the university should provide variety of learning forms, since traditional classes, online contents and sessions using different technologies, on-the-job training, mentoring etc. Having options to choose, motivate the trainees.

• Leverage technology to support business objectives: the Corporate University must adopt a blended approach on the training opportunities, it means, to mix online and traditional resources in training. The flexibility resultant from the blended approach helps the company to meet the business objectives and consequently to support its strategic goals.

• Increase spending instead of cutting budgets: investing in human capital is always worth it. Even in crisis times investing in teams’ development helps the company getting differentiated.

• Use university resources as a benchmarking tool: best practices in training and human resources can be disseminated by workshops and seminars to internal and external publics.

• Prune your content every year: contents should be improved periodically to reinforce company’s goals.

• Extend your reach through learning alliances: developing alliances with suppliers and educational institutions are very helpful.

Since the objective of this paper is to discuss effectiveness of online training, the following argumentation refers to e-learning training and development.

2.1 Online Training and Development

The advancement and growth of technology, particularly e-learning, since the 1990s, created rich opportunities for human resource development learning interventions (WANG, 2010).
The “e-learning revolution” makes it possible for the trainees to individualize their learning experience and to study what and when they want (WANG, 2010).

The literature states that economic savings obtained from converting traditional training methods in e-learning in corporate programs are one of the most relevant advantages. Strother (2002) presents some examples of successful cases in adopting online training: IBM reduced its costs in two-thirds by migrating their training to online delivery; likewise, Ernst & Young reduced by 35% their costs with a blended solution. On the other hand, the author also says that many companies had invested large amounts of resources in online efforts and didn’t receive the costs reductions planned (STROTHER, 2002).

In this sense it’s important to check and try to understand why some companies are successful in their e-learning initiatives and others don’t achieve their goals in financial terms, learning effectiveness and performance improvement.

Strother (2002) argues that when we talk about online training, we have to consider that it doesn’t concern only to technology, but also to human factors. Similarly, it’s important to consider that effectiveness is dependent on training quality, even when we talk about e-learning models. Quality can’t be despised in favor of economic savings.

Annansingh and Bright (2010) define some barriers that affect e-learning training effectiveness and that should be considered by the trainers when developing online programs:

- **Time**: amount of time available for learners to attend training, refers to the time the trainee himself is able to make available and the time his manager will make available for him. Here is interesting to comment that, even though e-learning is flexible and can be accessed anywhere, anytime, it will be effective only if the trainee, his family and his leader support the training and make time available for studying.

- **Technology**: for effective online training it’s essential to have adequate technology, such as good bandwidth, a reliable and available e-learning platform and hardware.
It’s important to say that the platforms (LMS – Learning Management Systems) are purely administrative tools and though they are important for delivering in online training, their use will not guarantee course’s effectiveness if they are not aligned with content quality and mediation (PAGE, 2005).

- Resistance to change: many learners still prefer the traditional classroom format, because they don’t understand how e-learning works and can have a wrong perception about it, considering online model ineffective, inadequate etc. In order to reduce resistance, it’s necessary to create an organizational online culture. In their paper Annansignh and Bright (2010) affirm that negative experience with e-learning can cause resistance in future e-learning opportunities.

- Capability required: it’s necessary to have some computer literacy to attend adequately online training. In addition, it’s also important to be independent, self-directed, autonomous, responsible for their learning and to manage appropriately time to be successful in online environments.

- Drop outs: it refers to attrition on training. Many studies say that attrition rate in online model uses to be higher than in traditional training. This may be due to a lack of engagement of the learner in his educational process, a lack of feedback from tutor that leads to an isolation feeling and fail in motivation or even to the log duration of the course (online courses seems to be more effective if they are short or have short activities planned). In their paper Annansignh and Bright (2010) found that age affects significantly a learner’s chance of drop out, it means that older people drop out their online training more frequently than younger people do. It can be explained by seniority (older people use to be more senior in the company and consequently have less time available; senior managers can feel they don’t need the skills developed in
the training, as they can delegate work to their staff) and lack of technology literacy (older people tend to have more difficulty with technology than younger people).

Johnson, Gueutal and Falbe (2009) argue that besides of trainee characteristics and technology characteristics, an effective online program should also focus on learning process. Their model is shown in figure 1 bellow.

**Figure 1 – Model for Effective Online Training**


Strother (2002) also makes an interesting concern: should the results of an online training program be evaluated differently from traditional ones?

In her opinion, the effectiveness of a training program is independent from its delivery method. In other words, even though a program is online or traditional, its results could be
evaluated following the same process. For this purpose, she suggests Kirkpatrick’s four levels Model (STROTHER, 2002). Each of the four levels is summarized below (STROTHER, 2002):

- **Level I – Reaction**: measures how a participant feels about his or her experience in the training program. This step concerns to the participant’s satisfaction with what they learned, it measures whether they appreciated or not the activity proposed, or, in other words, it measures their enthusiasm with the training session. In online training, it’s common to find learner keenness, due to the flexibility and convenience of e-learning delivery method, which makes it possible to include training into a demanding work schedule.

- **Level II – Learning**: learning concerns to what (principles, techniques and concepts) trainees absorbed and understood from the training program. In this level, learning is measured by the verification of the trainees’ changes of skills, attitudes and knowledge. Currently trainers use a pretest and a posttest to measure what people learned from the program. In the case of online program, Strother (2002) argues that many studies in the literature didn’t find significant difference on the amount of content learned in traditional and e-learning training. In some cases, the performance of online training was better than traditional ones (in terms of grades obtained in the tests).

- **Level III – Behavior**: considering that achieving learning objectives (good grades on the tests) does not mean that the new knowledge and skills will be really transferred to the job tasks, level III measures on-the-job behavior change due to the training. It’s more complex than measuring participants’ perceptions about the training and even more complex than measuring their scores in learning tests. It’s complicated to assure that a person who liked the training and obtained excellent grades on the activities will
be able to incorporate what he/she learned on the job. And, of course, unleashing knowledge depends on peoples’ characteristics and company’s environment (is the company open to change? does the enterprise let people change processes, routines etc.?). The author suggests asking the trainees, some time after the training, how they applied what they learned and share their best practices.

- Level IV – Results: in this level the objective is to measure the influence of the training results on the business’ bottom line, such as costs reduction, quality improvement, costumer’s satisfaction, reduction on turnover rates, growth on employees’ motivation, increase on production, generation of new products/services ideas etc. It’s difficult to measure and even more difficult to guarantee that any improvement in the business is due to the training completed. It means business can obtain better result from many different initiatives and that’s why we cannot say it’s due exclusively to the training program, although the training can have a big participation on it.

Strother (2002) cites Phillips (1996) and his fifth level added to Kirkpatrick’s Model:

- Level V – Return on Investment: using the results found on level IV, we should try to calculate a monetary value, for example, how much the business received from increasing production? Considering these values, they are compared with the investment on training and then we have a ROI rate. Similarly to level IV, it’s hard to guarantee that the business benefits come from training simply and it’s tough to measure in a monetary way each of these benefits. Assessment methods are the basis of effective instructional practices. Then, developing good assessment tools leads to improvement of course’s design and facilitates the measurement of the training results.

To finish our argumentation, it’s worthy to present the Page’s ideas for more effective online initiatives. Page (2005) brings some tips for successful e-learning training as well:
• Analyze trainee’s profile, considering the trade-off between convenience of training and reward gotten from training.

• Measuring completion rates indicates how relevant trainees considered the course.

• Measuring trainee’s perception of knowledge for their jobs indicates how relevant they perceive e-learning. Here is important to say that usefulness of knowledge is not related to the amount of knowledge. It means that training programs don’t have to be long to be effective.

• Including blended format makes e-learning more successful: use synchronous and asynchronous tools, video and audio, colleague feedback and coaching.

3. RESEARCH METHOD

Considering the research’s objective “critically discuss the effectiveness of online training programs”, the study can be classified in a qualitative approach.

Qualitative approach aims to explore, discover or understand a phenomenon, concept or idea (CRESWELL, 2009). It is adequate for comprehending a social nature phenomenon, which usually is complex and peculiar, hardly explained in quantitative ways. The qualitative approach may be applied to problems which aim to describe a phenomenon complexity; analyze the relation among a set of variables; understand dynamic processes in social groups and comprehend deeply human’s behavior (RICHARDSON, 1999).

In these studies data is collected exactly where the problem is experienced; it means, the researcher does not take individuals to labs, nor send questionnaires for self-completion. Data is collected by behavior observation, by document analysis and by personal interview. The process may follow a pre-defined protocol but the researcher’s skills are essential for a successful collection. (CRESWELL, 2009).
In order to provide evidence for the proposed discussion, data were collected by personal Skype interviews. The interviews can be considered semi-structured, since the researcher followed a topics list but without a rigorous order pre-defined (GIL, 2002).

The sample was composed by four professors and one coordinator of online programs in Brazilian institutions.

4. RESULTS

Five interviews were made involving professors and a coordinator of online courses in Brazilian higher education institutions. Professors A and C worked in different online programs and shared their perceptions based on those experiences (Table 1).

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Course</th>
<th>ICT tools</th>
<th>Attrition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor A</td>
<td>MBA course (management) – for a bank Graduate education program</td>
<td>LMS (Learning Management System) Forum Chat</td>
<td>Low on the MBA High on the graduate course</td>
</tr>
<tr>
<td>Professor B</td>
<td>Undergraduate management course – for a bank</td>
<td>LMS Forum Chat</td>
<td>High</td>
</tr>
<tr>
<td>Professor C</td>
<td>MBA course (management) – for a bank Undergraduate management course</td>
<td>LMS Forum Chat Exercises Online Tests Email</td>
<td>Low on the MBA High on the undergraduate course</td>
</tr>
<tr>
<td>Professor D</td>
<td>Entrepreneurship Graduate course</td>
<td>LMS Forum Space for sending files</td>
<td>High</td>
</tr>
<tr>
<td>Coordinator A</td>
<td>Marketing Extension course</td>
<td>LMS Forum Chat Exercises</td>
<td>Low</td>
</tr>
</tbody>
</table>

Table 1. Sample composition

These cases were selected because involved adults, workforce students (students were already workers even in undergraduate programs) who enrolled the online programs wishing to progress on their carriers, progressing in their current jobs or changing to better positions in the market.
In Brazil there are rigorous rules for education, especially on undergraduate level. For this kind of education, Ministry of Education (MEC) establishes directions which must be followed by every higher education institution. Because of this context, undergraduate curriculum, although considers market trends and the competitor’s products, is created strongly based on MEC directions. Graduate level, in turn, has less rigid rules. For instance, graduate curriculum is more flexible and has a stronger market oriented perspective.

In none of the cases analyzed, trainee’s opinions (about their work needs) and expectations were taken into account while designing courses’ curriculum. In undergraduate courses, considering the legal barriers, this situation was expected; but for graduate courses, students’ perspectives were expected to be more strongly heard.

On the MBA courses mentioned by Professor A and Professor C, since they were tailor made, to meet the banks’ needs, the banks boards were deeply involved on the design and evaluation of the programs to make sure they fulfill the companies’ needs. For Professor C listening to the students opinions depends on the schools culture, it means, some are prepared to hear to criticism and act about it, changing activities, replacing contents and even faculties, others have a rigid structure which complicates the implementation of change.

Effectiveness in all the cases, except for the course mentioned by Coordinator A, is measured according to attrition rates, it means, a successful program is that one with low attrition rates. The Marketing course pointed by Coordinator A is the only one which considers students’ performance (on the course’s tasks) as a success measure. In addition, the MBAs pointed by Professor A and C consider, besides the attrition rate, the banks’ board perception about the program, which is not formally measured and is based simply on subjective evaluation.

None of the cases consider the student performance on the job, not even the banks have this kind of evaluation system. Consequently, it is difficult to find out if the course meets the market’s needs in terms of the workforce qualification. Thus, it is also hard to diagnose the
reasons for the attrition rates and design actions to reduce it and to increase satisfaction and commitment.

About attrition, as stated on the Table 1, rates are high in some cases and low in another. Low rates occurred on the MBAs and the Marketing course. Considering the first two cases, the low rate is due to the courses’ rules, it means, in both cases, as the course were designed for the banks’ employees and afforded by the bank, students who left the course had to return the amount (tuitions and other expenses) to the bank. In addition, leaving the course, in the banks’ cultures, is considered a bad behavior. For the both reasons, the attrition was low in these cases. On the Marketing course, attrition was low, according to Coordinator A, due to financial reasons; since the course was afforded by the students and was not refundable, students were motivated to finish it.

On the other cases attrition rates were high although the course was afforded by the student or their employers. The reasons pointed by the interviewees are the following ones:

- lack of social presence, although in all the cases face-to-face meetings were scheduled;
- need for a proactive behavior, which is not natural for most of the people;
- lack of time planning, only the course mentioned by Coordinator A offered a suggestion of weekly planning activities (a schedule of work for the week);
- courses were mostly asynchronous which can be exhausting and reduce motivation, although most of them included chat sessions, these were not mandatory and didn’t have large participation;
- personal issues, such as changes in family or work conditions;
- many activities which overload the student
- classes are too big, so the tutor cannot pay enough attention and support to everyone; people feel unvalued and frustrated;
• lack of discipline of the student and lack of support of the tutor to help student developing this discipline

• student expected the course would be easier than traditional ones, but online courses have a large amount of activities which can make them more demanding than face-to-face;

• program quality issues;

• trouble dealing with technology (Professor B’s students had problem with the course technology, since they lived in the northeast side of the country where economic and social development are lower and Professor C’s older students had difficulties dealing with technology, due to their lack of knowledge and experience with those tools).

The main reasons for choosing an online program, instead of a face-to-face equivalent one, on the interviewees’ points of view are: time and space flexibility, lower costs, opportunity to interact with other people and learn from them (professors and peers), possibility of conciliating personal life, work and education. The main positive points of the online programs are: students’ discipline for studying; space flexibility (student can attend the course anywhere, it means a course can be global); reduced need for travel; conciliation with their family lives; lower tuitions (compared to face-to-face courses), opportunity to attend a renowned school, even leaving in other towns, states or countries. In turn, negative points are: lack of social contact, online course reproduces its face-to-face equivalent, when it should have a different pedagogical approach; insufficient support from tutors, coordinators and staff; course more difficult than originally expected by the student; feeling of lonely; inability of studying alone; fear of interacting with unknown colleagues.

5. DISCUSSION
This paper tried to bring resources for discussion about the effectiveness of online training and development, considering its relevance for human resources development initiatives nowadays. The results cannot be generalized for the whole Brazilian education system, not even for the whole portfolio of the inquired institutions, but they bring interesting points that should be considered by decision makers in education market in order to provide quality and effective background.

Through the study of the literature we have noticed that, when we talk about training, traditional and online methods have much in common. Both of them should consider the company’s needs, individual learner’s characteristics, training motivation and other aspects described in early sections.

On the other hand, we can say that online programs have specific factors that must be taken into account if a company desires to get an effective training and consequently to improve its business.

Online education is recognized for stimulating learners’ involvement and pro-activeness on his/her learning process. They are invited to interact with their peers, contents and technology and all of these components lead, in many cases, to a change of attitudes and to a critical thinking development. For this reason, we may think this kind of training is more effective on changing participant behavior on-the-job. But it’s essential to consider that the hierarchical structure must permit the behavior change, otherwise all training programs (online or traditional) will be a resources’ waste. Second, although online training seems to result in more active learners, we must care about the training quality, including contents and books selected, faculty’s expertise, technology (platforms, communications software, bandwidth), services aggregated (support team, student support, feedback to the students etc.) and course design (planned activities, feedback to students, assessment, interaction sessions).
In Brazilian cases, considered in this research, effectiveness is measured essentially through attrition rates, which is high in many cases. The results presented show that students still have difficulty on changing their educational behavior from passive to active, have wrong expectations about online education (expected the course to be easier) and miss significantly social interaction.

Here is relevant to say that interaction is one of the most important dimensions of training (online or not). Especially in online modality it’s mandatory to include synchronous and asynchronous sessions, moderated and planned to stimulate mutual constructive learning.

The first recommendation is to evaluate the company’s needs in terms of new skills and knowledge. Second, analyze if the target is open-minded to an online training or, even more important, if they can lead with technology and distance.

At this point, it is necessary to remark that discipline, motivation, company’s support and family’s support are fundamental.

Online delivery method has huge advantages but it will be effective if the trainer assures that it’s the best model to fit business’ goals and needs. If e-learning is adopted just because of its potential to reduce costs or to connect people from different plants around the world, it won’t achieve the results expected and will frustrate the company and the trainees and will represent a waste of money, time and energy.

In resume, training and development is an important effort for every business in the current economic and social challenging environment. Larger businesses can create their own Corporate Universities and develop internally their courses or order a tailor made solution to a supplier. Smaller businesses could create some internal initiatives or select some training programs in the market and provide them to their employees. In both situations they should care about educating their people in order to improve performance and become more competitive.
It’s hard to evaluate training results because, as Strother (2002) brings in her paper: it’s expensive and time-consuming; it’s complex to determine a cause-and-effect between training and business outcomes; and defining the outcomes to be measured is challenging.

We should notice that even though e-learning methods seem to have superior benefits if compared to traditional programs in level II of Kirkpatrick’s Model, effectiveness of a training program is much more complex to assess and involves many other factors, like unleashing the new knowledge and skills in work space, developing critical thinking and other deeper characteristics.

In other words, we would like to state that e-learning can be effective in corporate training, but it’s mandatory to analyze people’s and company’s characteristics and design a program which fits them. This includes the right choice of technology, software, tutors, contents and interaction activities.

To finish, it’s important to evaluate, as best as possible, training outcomes and ensure skills and knowledge resultant from the program will have space in the company routine.

With this care, e-learning will be successful in bringing together people world-wide located and will develop expertise in the workplace.

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