

THE IMPACT OF THE IMPLEMENTATION OF DISTANCE EDUCATION SYSTEMS IN A TELECOMMUNICATIONS COMPANY

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Abstract: This paper describes research carried out at a telecommunications company, focusing on the changes caused by the implementation of Distance Education Systems (DES) for employee training. The objective was to analyze these changes from six points of view: structural, technological, cultural, political, strategic, and human, based on Motta's analytical chart (1997). The research also tried to detect how to identify resistances generated with the implementation of the DES. Results show that there is a global consciousness that the DES represents an interesting learning alternative, and because of this, employees proved to be in favor of its use.

Key words: learning organizations, on-the-job training, learning systems

1. INTRODUCTION

We have noticed that some organizations are employing new approaches to management, with new parameters that allow them to follow world changes effectively. One of these strategies appears to be in the development of abilities and skills of those who take part in a company through the use of technology applied to capacity building plans. In the search, information technologies aided in the development of interesting teaching and learning alternatives, such as in the case of Distance Education, a system that is being used in capacitation courses for employees that want to have a competitive plus within the competition environment they are embedded.

The use of Distance Education offers benefits such as the fact that workers do not need to leave their working area to attend a course. There is also interactivity between students and teachers, the creation of virtual multidisciplinary and dynamic teams, operational cost reduction, among others.

However, the introduction of this kind of system may imply a number of different challenges. As a technology to be applied, it may cause an impact on the organization. While the technologies become more complex, demanding a bigger effort from the people in their implementation, it is fundamental that the assessment of their impact is not only in technical and financial aspects, but also concerned to issues of the organization and its capacity of accepting and supporting organizational changes decurrent to a technological implantation (Graeml, 2000).

Therefore, in this context, the present research tries to analyze changes generated after the introduction of a distance education model, considered an information technology, in a company named Telek. This company makes use of Distance Education for human resource training and development. Telek is a fictitious name in order to protect the company's identity.

In the following sections we discuss some theoretical issues about important changes in the organization, the research methodology used in this work and the obtained results.

2. CHANGE PHENOMENA AND THE SIX PERSPECTIVES OF ANALISYS

When discussing the term 'change' we often refer to technological, economical, political, and social variations and innovations that have influence in the everyday life of any kind of organization. Many models and theories, models under new paradigms that apparently represent reality in a better way, strongly arised in these last few decades, aiming at transforming, evolving and managing better the changes (Motta, 1997). Many of these models are not more than copies of other experiences that have nothing or little to with the reality of the environments where they would be applied. In fact, we could say that there is not a single model to guarantee change efficacy, as well as the contingency theory tells that there is not a single model to successfully administer the organization. All is relative and depends on the analyzed context.

The current trend is that each organization tries to develop an action plan that is coherent with its internal and external condition, which requires a particular work of creativity and innovation.

Motta (1997) considers that the construction of theories to understand the change phenomena can be justified by the ability of explaining reality and by a practical application in administrative problem-solving. We highlight six perspectives for understanding the global change phenomena:

1. *The strategic perspective* sees the organization as an open system inserted in a changing social, economic and political context, privileging the way one relates with society, through its products and services. It makes way for decision making, considering the information flow between the organization and its environment. One considers that to change an organization it is necessary to redefine its mission, objectives and ways of identifying and selecting action alternatives.
2. *The structural perspective* sees the organization as an authority and responsibility system, which defines the action realm of each person, and the consensus and subordination to attend specific functions already set. It assumes the previous definition of the worker's formal role as a main factor of efficiency. We then conclude that in order to change an organization it is necessary to change the way how authority and responsibility are formally distributed.
3. *The technological perspective* focuses on the work division, function specialization and the kind of technology to be used. One may say that the inference pattern with relation to changes is the alteration of its technology, function specialization and their productive processes, that is, to reconsider the way how material and intellectual resources are used.
4. *The human perspective* as for example: leadership, motivation, communication, skills development and aptitudes. The human perspective concentrates on the link between work and the individual, highlighting factors of motivation, leadership and other psycho-social factors that lie under the institutional prescriptions and authority lines set formally. We believe that in order to change an organization it is necessary to modify attitudes, behavior and the way how individuals participate, through an incentive to collaboration, motivation practices, leadership and reconstruction of the career rewarding system and personal qualification.
5. *The cultural perspective* sees the organization as a set of values, beliefs and habits collectively shared that typify and differentiate the organization from others. These cultural expressions are perceived in the structure, in the authority, in meetings, in ways of communication, among others. This model gives priority to what is collectively shared and individual behavior and attitudes. In the change, we believe it is important to substitute the collective program in the search for a new sense of identity, as if it were a collective enterprise to alter the people's values.

6. *The political perspective* considers the organization as a power system where people or groups look for more influence in the decision process. Power is seen as an end in itself. With relation to change, this model finds it necessary to bring about a power distribution, in order to satisfy new action priorities. In this case, to change an organization becomes interference in the ways how interests are articulated and aggregated and how the power between coincident and conflicting individual interests balances. This includes internal negotiation and conflict solution (Motta, 1997).

In past decades, resistance to change was explained in terms of technological inadequacy or ignorance; one would try to eliminate it simply by trying to force people to submit to the new order. Today, resistance to change is seen to stem from both individuals and organizations. The origin of the former is the individual perception caused by resistance to novelty, fear of the future (or status quo loss), habit, or loss of security (Robbins, 1999). As innovations progress, resistance to them takes different forms over time. Initially, resistance is strongly focused on personal characteristics and subsequently shifts to organizational issues. Today, resistance is seen as something as natural as change itself, and as a source of criticism and creativity, and as a better use of human abilities (Motta, 1997).

3. THE RESEARCH METHOD

This research used both qualitative and quantitative methods. A descriptive study employed interviews and document analysis, while questionnaires were used to gather quantitative data. These were both applied to the management levels, distance education experts, and employees that attended the courses. 949 questionnaires were sent via e-mail, and of those, 219 were answered. The company where this research was carried out introduced the Distance Education System in the state of Rio Grande do Sul in 1996. Since then it has undergone several changes, stages, and challenges.

4. ANALYSIS

The DES collaborated in a way to reach certain strategic goals of the organization, such as customers' satisfaction through distance training courses for employees. This change opened the internal and external communication systems and generated new ways of acting, thinking and involving the participants of the customer-supplier-worker process. Besides,

the internal public became more aware about the organization purpose, a concept that meets Motta's (1997) ideas.

We highlight that this innovation occurred not only because of the competitive environment of the telecommunication area, but it also has to do with fulfilling institutional requirements of this environment, such as those of Anatel (a regulating telecommunication agency), that controls product and services offered to customers so that the company meets quantity and quality indicators. This requirement obliges the company to improve its management policies. Thus, the position of authors such as Morgan (1996), Tolbert & Zucker (1999) is confirmed.

According to the results, there is not enough evidence to deduce that there were structural changes after the DE System implementation. However, we do not observe any change that has to do with the distribution of responsibilities, authority, hierarchy, re-distribution of rights and duties, and flexibility of formal limits, as affirmed by Motta (1997). These results may be also due to the fact that some specific affirmations that questioned this topic were not considered convenient and therefore were not taken into account in the final questionnaire, what made the task of finding structural change evidences more difficult.

We emphasize that this system is at an early stage and it is not available to all areas in the company, what makes the possible occurrence of changes still more difficult.

Results show that the applied leadership process, according to Likert's categories, shows little relationship and support of superiors to subordinate workers. Leaders do not motivate subordinates to discuss ideas, suggestions or opinions about the DE System. Lack of motivation and little participation of subordinates are perceived in this aspect.

This change process is characterized by little interaction and communication drawn towards objectives accomplishment. It does not fulfill the objectives of an open, fluent and sufficient communication, so much with the people that coordinate the DE System and the management level, just as the management level and employees.

This characteristic even seems to have some influence in the aim of changes proposed by Motta, which is to open a space of motivation, personal and professional satisfaction for the workers. There is low motivation and commitment of Telek workers on attending distance courses. We verified that the motivational element is still an inhibiting factor in the process on a Distance Education application.

An important aspect of this study is that the participation in distance courses is voluntary, presenting a style of management closer to a participative style, which results validate Likert's position. Although other results show that even if it is not a formal requirement of the company that

employees attend a distance course, there are subjective factors that make the worker feel compelled to attend certain courses the DE System offers.

As for changes in workers' behavior and attitudes in their work after the DE System implementation, there are divergent results.

The respondents of the Third Level found that there were no changes, on the other hand, the respondents of the First and Second levels believe that they have noticed some differences after the DE System usage.

Although we observe that there were changes in the worker's behavior as for his/her learning, the generated trend in search of new knowledge, to give value to information and to permanently learn is being built. The worker may keep on studying on his/her own, controlling his/her own learning, fulfilling the autonomy principle of learning proposed by Peters (2001).

For Telek, culture change becomes the foundations for the DE System. The company believes that self-controlled and independent autonomous learning, are principles that the worker must follow. The company also believes that they have changed learning habits, ways of conceiving self-development, even time availability dedicated to this activity, because the virtual learning model is very different from the traditional model.

However, we point out that despite the availability and aperture that workers show to attend distance courses, there are drawback elements that prevent this DE System objective. The continuous interruptions during time dedicated to virtual training, the required demands done by the company, and less time dedicated to learning, do not allow the worker to benefit from this technological tool, nor to consolidate his/her new position.

Workers insist on this point and are very clear, expressing their problems to match the time the company makes available for qualification and the real time they have to accomplish it effectively.

5. DISCUSSION

We observe that the level of idea exchange, suggestions and impressions on the DE System are minimal and, making it difficult to set forth a new equilibrium where people involved can set their values through negotiation, specially in what concerns the DE System. We cannot even infer that the DE System generated changes in the distribution of resources of the overall organization, that is, there is no evidence that supports this hypothesis.

Based on the analysis of six perspectives, we may sum up reasons for the resistance to the DE System at Telek presented by its users:

- *Motivation*: is a factor that makes the change process difficult. The origins of lack of motivation result not only from the resistance to change

itself, but to the organizational surroundings where the worker is inserted and has some influence on his motivation.

- *The change itself*: is the fear of the unknown. The dread of novelty, insecurity in relation to this change process, as mentioned by Motta (1997).
- *Fulfillment of the organization goals*: the demand for goals, objectives and requirement fulfillment diminish the worker's time. The requirement of results generate a lack of time for self-development during working hours
- *Planning of DE System goals*: the lack of the involvement of main characters, such as workers that receive management courses and the team that directs the DE System, in the construction of common goals, objectives, idea exchange and suggestions makes the construction of dialogue spaces more difficult and generate resistances, as mentioned by Robbins (1999).
- *Technology use*: there are people that do not get familiar with the Distance Education technology, as pointed by Graeml (2000).
- *Application of virtual to concrete*: the difficulty in dealing with something that is not physical makes it difficult to accept the DE System. The lack of physical interaction with other colleagues that attend distance courses also causes some resistance
- *Habits*: the traditional education habits still must be overcome. These factors inhibit some workers to accept a new capacitation methodology. It is a long and adaptive process, according to Motta (1997).

Nevertheless, there are other reasons, besides those the interviewed people pointed out that may explain resistances. They are not only for the reasons exposed above, but also because the worker loses his or her identity due to the lack of positive answers by the environment where he/she is placed. These other reasons would be:

- their superiors do not stimulate them,
- the environment of change in the whole organization,
- the low level of exchange of ideas.

These and other factors end up having some influence on the workers' attitudes towards the new technology - in this case, Distance Education.

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