

LIFELONG LEARNING PROCESS IN ORGANIZATIONS IN THE 21ST CENTURY

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Abstract: Public sector managers now view e-learning as an important instrument for obtaining skill-based organizational outcomes. This paper examines the organizational determinants of e-learning: larger establishments with multiple public services, organizations that employ educated workforces and well-established internal labour markets are more likely to adopt an e-learning strategy.

The influence of many such factors requires that a value-based analysis is undertaken to help organizations make optimal decisions about the choice of e-learning. Studies have shown that the use of e-learning can be a cost-effective solution in learning organizations. But it still requires senior management time to ensure that the potential is fully utilized. Value-based analysis must be the precursor to identifying the training needs of employees.

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1. INTRODUCTION

Organizations plan and implement e-learning strategies to augment the skill level of their workforce. However, any e-learning strategy has multi-faceted objectives, and organizations adopt e-learning programs in line with their own particular needs and priorities. For instance, with the advent of information and communication technologies, public authorities now aim to encourage interactive e-learning.

What are the factors that make an e-learning program a success? The issue has assumed great importance due to the recognition of learning opportunities closely related to work environments and due to many national training schemes failing in their objective of effectively using the workplace for training purposes. E-learning is a relatively new form of training delivery and is growing in popularity. Most training professionals now accept it as a credible training strategy that has both advantages and disadvantages when compared with "traditional" instructor-led training events (group or individual).

The aim of e-learning is to ensure that technology makes an effective contribution to the development of a skilled workforce and to assist progress toward economic competitiveness (Pantazis 2002:31). E-learning can be useful for developing knowledge of almost any subject matter and for a range of skills; however, learners many need to put their new knowledge and skills into practice away from the computer.

An e-learning strategy may be motivated by: the identification and the recording of the training needs (e.g., through interactive questionnaires or tests); the delivery of learning (e.g., through computer-based training packages), supporting learners, especially those at remote sites (e.g., through e-mail or video/computer conferencing); the assessment, through computer-delivered tests of knowledge or skill; the recording and tracking learning and assessment, e.g., by recording course attendance or test results or by tracking learner achievement against some other educational standard.

When interactive citizenship becomes an important policy goal, e-learning provides the necessary means to realizing the Internet-based objectives. Authorities whose offices are spread across a number of sites will find the concept particularly attractive, as will those where the employment of specialized staff at every location is neither practical nor cost-effective. Authorities with a large number of services will also benefit.

E-learning may be used as a self-study resource without tutorial support, for self-study but with tutorial support and/or mentoring, small groups, or as a part of a larger course or training event. The potential advantages of e-learning include: convenience; cost-effectiveness; greater efficiency and time saving (e.g. from computerized tracking systems); better student support; enhanced and more flexible learning; training time significantly reduced; easier access for those whose opportunity for training is otherwise limited by their location; consistent quality of training, which can be checked before starting; the fact that training is individual and allows the user to work at his or her own space.

E-learning also helps reduce direct training costs, through improved trainee performance on the job, lower premises costs (a computer takes up little space), no travel or subsistence costs and no course fees. As e-learning enables an employer to train key staff who could not be spared to attend a conventional course, it is cheaper than the conventional course, and the employer can be fit training around work needs.

While the advocates of e-learning are keen to see its wider use, there are some perceived disadvantages that need to be addressed before e-learning can be used as a mainstream training method for learning organizations. A potential issue surrounding e-learning is that competence in the classroom environment does not necessarily translate into competence online. Other disadvantages include: the fact that e-learning can be viewed as cold and impersonal; the fear of technology is still apparent in many people, certainly for those over 40 years of age; well-structured e-learning may appear easy and can be devalued in the eyes of both the trainee and their colleagues who had to "learn the hard way".

The introduction of e-learning as an all-encompassing training strategy thus appears to have many problems; not least is the initial cost and the concern that it may not be effective. E-learning is also often an innovation for an organization and the pressure on the both the trainer and the trainee is intensified as e-learning is highly visible and relatively expensive at the start. Senior managers will then be sensitive to the costs and benefits of using this form of training.

In addition to these visible pressures, there are a host of other organizational factors that interplay with the decision regarding the choice of e-learning for attaining and developing a skilled workforce. In this, rapid technological changes and the wide application of skill-driven systems have played important roles. This suggests that e-learning is only one factor in a multitude of relationships that increases the effectiveness of learning environments.

On the other hand, a large amount of anecdotal evidence suggests that for work-based learning to be useful, it needs to be carried out in conjunction with measures that augment the effectiveness of training. For instance, multi-skill training will be of little use for improving productivity if work tasks are divided and assigned into small segments.

Training will auger well if connected with work-related experience and for both these measures to improve the organization of service provision, some participation in workplace decision-making will be needed. Thus, one measure is more valuable when other complementary variables are also put in place, and conversely, less than optimal outcomes may result if various elements of an intervention program are not well coordinated.

E-learning should thus be seen as part of a value-creation process. A focus on value helps delineate the factors responsible for a successful e-learning program. Value is derived when different parts of the program draw upon an existing set of capabilities. Value-based strategies are also about tradeoffs, that is, choices from a set of alternatives need to be made to put in place a well-coordinated program (Porter 1996:74). By thinking in terms of tradeoffs, it is possible to choose the most relevant capability set necessary for exploiting complementarities between interacting variables.

After all, training and learning policies and programs do not operate within a vacuum. Learning requirements are not the same in all jobs, and different functional areas have very different job structures. Moreover, broad-brush e-learning strategies are less prone to a systematic inquiry into finding the optimal match between the training needs of the employees and how best these needs can be met.

Much existing theoretical research on work-based learning has concentrated on analyzing the choices of individuals, in making an investment in improving their work-related skills. This analysis has generally been couched in terms of how human capital is formed and developed over a period of time. The analysis underplays a role of organizations in learning and training choices. It is simply assumed that organizations will make an investment only in specific types that are relevant in their operations, and thus easily recoupable (Becker 1993:6)

On the other hand, individuals will be more interested in making an investment transferable skill that will enhance their bargaining power vis-à-vis organizations. We focus her on the 'determinants of e-learning at the organization level. This is due to the important role that now organizations play in creating learning opportunities. Although we make a distinction between employee, organization and institutional level analyses for delineating the role of learning and training in the value-creation process, our primary concern is with determining the ability of organizations to make optimal e-learning choices.

2. OBJECTIVES

This paper aims at showing the importance of using e-learning, which proves itself to be a cost-effective solution in learning organizations, as an instrument for obtaining skill-based organizational outcomes. Thus, we can underline two major objectives of this paper:

1. Firstly, the analysis of the factors that influence the e-learning process (for example, factors that are related to employees, organizations and institutions), which can give as a better understanding of the process.

2. Another objective of this paper is to show that a value-based analysis must be the precursor to identifying the training needs of employees.

Overall, this article points out important trade-offs that need to be made in order to obtain a successful outcome in public services delivery.

3. ANALYSES

3.1 *Employee-Level Factors*

A general observation is that educated workers are more likely to receive e-learning opportunities than their relatively less-educated counterparts. It is argued that since educated workers are more likely to benefit from increased training, there is a chance that they will be more involved in e-learning programs. To put this observation in its right economic context, we need to consider the current climate of employment and wage practices.

The last two decades have seen major changes in the demand for skilled workers in industrialized countries. There are three discernable trends: first is the growth of non-manual wages and employment relative to manual workers. At the same time, the employment decline among manual workers has been disproportionately concentrated among unskilled workers. Finally, there is the evidence of a widening wage inequality within skill categories including the unskilled (Mincer 1989:3).

Since the number of educated workers in the labor force has increased overall, it should have normally driven down wage differentials. This is obviously not what has happened. It is then argued that education becomes more valuable in periods of rapid technological change; that it takes more education to cope with the constraints imposed by new productive systems. This has led many authors to conclude that technology and human capital are relative complements (Kremer 1996:54). Thus, technological innovations always serve to create demands for educated and skilled workers (Acemoglu 1998: 113). It is in this sense that a value-based training strategy should target educated workers because they are more likely to benefit from technological advances in production.

Interdependencies in production and service provision also imply that increase in wage inequality will be accompanied by growing segregation of workers by skill. That is, over time, it will become difficult for high- and low-skilled workers to find work in the same organization. Under these conditions, the economic contribution of archetypal firms will use both high- and low-skilled workers, has declined relative to firms whose workers are much more homogenous (Kremer 1996:56). This effect may be relatively weak in the public sector but it is important to note that many public organizations have also experienced increased multi-skilled environments in recent years.

Therefore, it becomes important that e-learning initiatives are targeted at all those employees who are dealing with a related set of tasks, rather than at a select few. Since the skill content of a job complements the expertise of others working on the same set of operations, an all-encompassing e-learning approach will be needed in this circumstance to upgrade the organizational capabilities.

Similarly, long-term workers benefit more from e-learning opportunities because they have more time at their disposal to learn and employ their skills. This is especially the case with the public sector employees. It is then appropriate that e-learning programs are offered to those employees with the organization for a long period.

Although short-term contract employees sometimes have important contributions to make to the life of the organization, the mere fact that the skill employed by

organizations are homogeneous means that it makes more sense to target employees who have long-term commitments to the organization.

Gender can also play an important role in the firm's decision about who gets e-learning benefits. It is generally accepted that women are more likely to develop their career with the organization with which they started their career, thus paving way for long-term career plans. If thus becomes optimal to provide training to women, especially those whose tasks matches the work of their employees.

It is not uncommon to provide e-learning instruction to those who are in middle- or high-ranking positions. This is especially true when e-learning is not related to induction programs. When e-learning is related to new technologies, or when organizational systems are being introduced, it is more likely that middle-ranking managers will be selected for e-learning programs.

This is likely to happen because of the coordinative nature of the job middle-ranking managers often do so. They can feed information to their seniors about the potential benefits of new systems, while at the same time organizing training required for the lower level staff. Their net contribution to the value-creation process is enhanced when they undergo training related to the new organizational activities.

3.2 Organizational-Level Factors

Many public authority initiatives are now designed with the objective of wanting "all services" to be available online. This poses enormous challenges to the concerned organizations. This is especially true for local authorities that run so many of the vital services that could in theory be provided electronically.

One challenge comes from the potential ability of the Internet to streamline delivery of existing service. As a result, the relationship between local authorities and the public will change as now it will be easier for both parties to communicate with each other. For instance, local authority web sites used to provide a limited array of services such as planning application database, but now citizens can also find out who their local officials and councilors are, send e-mails, request a birth or marriage certificate, look up school tables and report broken street lights, etc. The move toward interactive citizenship on these lines will then have significant effect on the nature of skills employed and now these new skill demands are met in public organizations. There are indications that different organizations hire different quality workers.

The catering industry can be cited as a relevant example in that restaurants come in a range of quality levels. McDonald's will not hire famous chefs and Maxim's will not hire teenage waiters. Systematic differences in service quality, associated with differences in employees' skills, are a plausible explanation of why different types of restaurants employ workers with different levels of skills. Similarly, one finds a positive correlation among the wages of employees in different occupation within an organization. Secretaries working for the public prosecutor's office earn more than their counterpart in an educational establishment. This happens because the secretary's wage in a law firm correlates with one of the lawyer's.

This suggests that workers of different skills levels are imperfect substitutes, and that output is more sensitive to skill in some tasks than in others. As a result, organizations tend to specialize in one skill level or the other, rather than employing workers with all skill types. New information technology has spurred the move toward this interdependency. Strategies such as restructuring, horizontal networking and team-building

have been designed to respond to these changes. These trends are particularly evident in public sector organizations. This has important implications for e-learning strategies.

An e-learning program needs to cater to the requirements of an organization in order to specialize in a core set of skills (e.g. mastering several related skills such as various systems in information technology) that will enhance the ability of an employee to perform a particular task more efficiently.

Greater benefit will also accrue if e-learning instruction enhances the ability of employees to interpret information (e.g. the development of intellectual skills) relating to a particular set of tasks. This will facilitate their learning of multi-task skills. Further, the development and effective utilization of multi-level skills would require complementary human resource management strategies such as employee participation in return, team operation and employee involvement in decision-making. It is because of these effects that measures such as flatter hierarchies, decentralized supplier operations and information sharing have become a common practice.

An important number of empirical studies show that the organization's size is an important determinant of training incidence (Acemoglu 1999:107). This is understandable because it is more likely that larger organizations are engaged in several technologically intensive operations. Thus, they will need to provide e-learning benefits to workers who are engaged in all these operations. It is because of these small units, which are part of a chain if a larger organization, will also provide greater training opportunities to their workers than workers of smaller establishments. Another possible reason is that larger organizations employ a wide range of occupations and are more likely to experience one or more occupations characterized by skill shortages.

Some occupations are in short supply, and the organizations employing them can be expected to report higher training incidence. Occupations such as managers and administrators, professional occupations, and office workers are thus often targeted for training. This is because these occupations are likely to experience shortages at one stage or another.

The type of organization is also a relevant factor in affecting the degree to which e-learning can contribute in the value creation process. Hospitals and health establishments have one of the highest probabilities of experiencing a shortage of skilled employees. Also significant are perhaps catering and entertainment establishments. This is partly due to the fact that service-intensive operations require more training compared to those with less demanding technical needs.

Single location establishment types often emerge as being significantly higher recipients of e-learning benefits. This is because establishments with multi-functional links are able to transfer individuals with skills and expertise themselves, between locations. This intensity of training incidences may also vary among different service sectors. Sectors such as agriculture, construction and transportation are more likely to suffer from a shortage of skilled employees, and thus the need for training is observed in these particular areas.

Other organizational factors may also be responsible for determining the outcome of e-learning. Organizations with established internal labor markets are more likely to provide training to their staff because vacancies are often filled from within.

The industrial relations system may also influence training investments. To the extent that unions promote measures that act to stabilize employment, they may strengthen incentives to provide e-learning programs. Several other explanations can also be offered to explain the link between union and training incidence.

Unions may be a conduit for an equitable provision of e-learning opportunities. In addition, the propensity of employees working for a firm providing e-learning programs increases with stronger links with trade unions. Whatever the case, there are indications that there is a positive relationship between trade unions and the incidence of e-learning initiatives.

3.3 Institutional-Level Factors

It is generally understood that the collective good features of training increase the probability of training incidence in situations in which there are strong institutions, like research and government training agencies (Crouch 1999:29). The institutional context of training is therefore often explored in determining the efficacy of e-learning.

More significantly, the way in which e-learning is organized, financed and conducted can influence the way employee relations become an important part of internal labor markets. This in turn affects institutional features such as seniority rights, compensation systems, pension-vesting rules and legal or collectively bargained restrictions on layoffs, which provide the foundations to develop internal labor markets.

An approach to e-learning that relies on an interdependent relation between technology and skill puts the analysis of e-learning in a wider context (Hirschman 1970:67). It argues that economic and technological conditions have the potential to influence managers to use this new relation as a means of developing a new kind of e-learning approach.

These conditions are seen as creating new possibilities for managers to combine new technology with a skilled labor force. Managers can employ e-learning with a technological system, in ways that create conditions for upgrading the skill level of employees. In so doing, it also favors the adoption of skill-intensive productive systems.

E-learning becomes within this context, an important strategy because an improvement in the abilities of employees to interpret information, make decisions and solve problems allows a greater exploitation of the functioning of new technology.

Questions about the role played by agents like managers and employees (regarding the e-learning outcome associated with skill change) become paramount. What role do employees play in decisions regarding the type of training made available? How do managers respond to the skill requirements of new technological innovations? Or to what extent do the existing skills bases of organizations determine the adoption of new service systems? These questions are answered only by taking a value-based approach to e-learning.

4. CONCLUSIONS

An e-learning approach may entail a significant investment, so there is a need to carry out a thorough analysis to verify that this is the right solution. The organization may decide to retain a consultant to help it think through the issues as applied to the organization, for example to help in setting up a learning resource center.

Value-based analysis must be the precursor to identifying the training needs of employees. The development of the appropriate training program matched to these needs has to be undertaken and it is here that e-learning could be a cost-effective way of meeting the identified need. The high cost of developing e-learning for the organization usually prohibits this as a solution, but there could now be a comprehensive e-learning training strategy that effectively meets the needs and this will give distinct advantages over the traditional way of providing training.

Organizations make training choices in accordance with their strategic objectives, but they are also fundamentally influenced by many other constraints. These constraints are related to the organization's basic operational activities, but factors such as the existing capabilities of employees, organizational preferences for skill and knowledge and internal labor market practices, are equally important in determining the role of e-learning in the value-creation process. This article has pointed out important trade-offs that need to be made in order to obtain such an outcome in public services delivery.

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