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The benefits of career development through e-learning

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Abstract: This paper presents the advantages of e-learning compared to traditional learning in the career development. Recent studies have shown that most new jobs require skills that only minority of the workforce possess. In such environment, the process of lifelong learning becomes essential. In career development, people usually cannot be observed as students in a classical way because of their workplace responsibilities. The transfer of the learnt to the workplace thus becomes most important. E-learning is a method of education which includes self-motivation, communication, efficiency and technology. This method of learning involves online courses. The knowledge students gain from these courses is immediately applicable to daily activities at a workplace. Students have positive attitudes towards the use of e-learning for personal training and development. This approach also brings the new motivation for performing daily activities at the workplace. The adjustment of study programs to this type of education could establish a synergy between universities and companies. The need of companies should drive development of online courses at institutions that provide e-learning. When the implementation of learning management system into business organizations and faculties is discussed, open source software is often the first choice. From our point of view that should be considered as a good choice.

Key words: career development, e-learning, education, information technology
JEL classification: I20, I25

Предности развоја каријере кроз електронско учење

Сажетак: Овај рад приказује предности електронског учења (е-учење) у односу на традиционално учење у развоју каријере. Недавна истраживања су показала да већина нових послова захтева вештине које поседује само мали део радне снаге. У таквом окружењу процес континуираног учења постаје неизоставан. У развоју каријере људи се обично не могу посматрати као студенти због њихових обавеза на радном месту. Због тога је од великог значаја трансфер учења на радно место. Е-учење је начин образовања који укључује самомотивацију, комуникацију, ефикасност и савремене технологије. Овај метод учења подразумева online курсеве. Знање које ученици стичу на овај начин одмах је применљиво на дневне пословне активности. Ученици имају позитиван став према коришћењу електронског учења за лични тренинг и развој. Овај приступ доноси и нову мотивацију за свакодневне активности на радном месту. Усклађивање студијских програма овом виду образовања треба да успостави синергију између универзитета и компанија. Потребе компанија треба да диригују развој online курсева на институцијама које омогућавају електронско учење. У пословним организацијама и на факултетима open source софтвер је често први избор када се говори о имплементацији система за управљање учењем. Овакав избор софтвера се може сматрати оправданим.

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Кључне речи: развој каријере, е-учење, едукација, информационе технологије
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1. Introduction

Career development is seen as a formalized career planning activity aimed at developing employees who are ready for changing jobs, to reduce absenteeism and absenteeism caused expenses, to cultivate the realization of individual potential, to motivate employees to establish their own career objectives and act upon them, to increase management awareness of available talent within the organization or for the organizational preparation of long-term trends that might pose either opportunities or threats (Rothwell & Kazanas, 2003).
Learning is an integral part of any workplace. It takes place on a daily basis, formally, informally and socially, either within the workplace environment or outside it. Individual employees are encouraged to take responsibility for their own professional development.
However, learning cannot always be so easily naturalized within workplace environment. While typical learning is a vital part of professional development, sometimes working organization does not provide individuals with the necessary resources or materials to maximize their learning potential. This is particularly true when it comes to accessing information from multiple resources, despite the ease with which the Internet facilitates information sourcing.
There is always some form of training and education within corporate organizations. It could either be learning about the job and ways of performing various tasks, or the form of managing relationships between colleagues. Whatever form it takes, it would always influence business environment of the company (Faherty, 2003).

2. Business environment and e-learning

The new business environment has forced companies to recruit, retain and continually work to improve the employees' skills and knowledge. Because of this, employees must provide the ongoing development of these skills and upgrade education to keep up with the changes and competitors in the market. With e-learning and modern technologies as tools to achieve this goal, corporate training can be organized at a higher level than ever before.
It is well known that most of the trends initially developed in the US soon become worldwide accepted. Recent studies have shown that 60% of all new jobs in the US will require skills that only 20% of the workforce is in possession of (U.S. Chamber of Commerce Foundation's (USCCF) Education and Workforce, 2013).
One approach to this issue is that company has information-rich learning resources within working organization itself, so that employees can maximize their learning potential. Information should be always available to minimize company downtime. Good policy should provide access to learning resources both at the workplace and outside it. It is of interest to a working organization to have more employees and potential employees and associates that use company's learning resources. This approach helps both career development of each individual and company success.

Traditional or competence-based training

Although traditional approaches can provide valuable learning experiences, they are not the subject of this study. We also do not elaborate on the symbiotic relationship between instructor-led and technology-based training, often called blended learning (Holton et al., 2006). In general, the focus of this paper is technological possibilities and curriculum

variations. The characteristic features of competence-based training as expressed in Table 1 (Jochems & Schlusmans, 1999) can all be supported by information and communications technology (ICT) to a greater or lesser degree (Bastiaens et al., 2002a; 2002b).

Table 1: Traditional versus competence-based training

Traditional Training	**Competence-based Training**
The curriculum is based on knowledge contents and discipline oriented skills	The curriculum is based on competences acquired in accomplishing tasks and dealing with practical or problem situations
Learners study pre-determined contents	Learners carry out learning tasks, either with other learners or individually
All learners go through more or less the same curriculum	A made-to-measure curriculum is developed depending on the entry level
Knowledge and skills are tested	Mainly testing of competences
Trainer or teacher-controlled testing	Self-assessment and peer assessment
Separate skills modules	General skills are integrated into learning tasks
Training units are derived from separate disciplines	Training units to a significant degree are interdisciplinary

Source: Jochems & Schlusmans, 1999.

In competence-based training, the emphasis is on the tasks which a person must be able to carry out and on the problem and practical situations. Student must be able to act competently. Development of the curriculum, selection of the training material and testing of the learners are based on these two principles. The emphasis is not on the development of knowledge alone, but on learning a complex combination of knowledge, skills and problem solving (Gulikers et al., 2002; 2005). A distinction can be made here in ICT support. First, ICT can be deployed as a primary medium where it creates the (virtual) context or problem situation for competence demonstration. Software is developed and simulates in more or less degree a reality (Stijnen, 2003). In addition, ICT can be deployed as an aid to competence-based training. All kinds of content environments, auxiliary systems and information and search tools can be consulted in carrying out or acquiring the competence.

Another fact to bear in mind is that education must be adapted to the labor market needs. All citizens should have access to quality education. No less important is that educated people are trained in accordance with changes in technology and changes in the labor market. In order to achieve this, cooperation between schools, economy, society etc. must be provided at the local level, as well as that between the relevant scientific and educational institutions at the international level (Langovic Milicevic et al., 2013).

In competence-based training, learners are no longer primarily trained to pass their examinations, but to learn independently and to manage their own learning process. Training on the basis of authentic tasks is an essential feature. When learners are confronted with real tasks, the learning becomes more meaningful and interesting for them. The most significant feature of an authentic learning task is that this must deliver a learning experience closely related to reality. Herrington & Oliver (2000) have formulated a number of conditions to be met by authentic learning tasks. See Table 2.

Table 2: Conditions to be met by authentic learning tasks

• They must provide an authentic context, which reflects the skills necessary in real life.
• The learning tasks must encourage authentic activities characterized by relevance to reality.
• Authentic learning tasks must make possible access to expert performance.
• Authentic tasks must make it possible to look at a situation from several perspectives and, where appropriate, fulfill several roles.
• Authentic learning tasks must encourage the common build-up of knowledge.
• Authentic learning tasks must stimulate reflection.
• Authentic learning tasks must encourage the articulation of implicit knowledge so that the learners are prompted to make all their knowledge explicit.
• Coaching and guidance must be offered at critical moments.
• Authentic testing must be built into the learning tasks.

Source: Herrington & Oliver, 2000

3. E-learning implementation

E-learning strategies

E-learning has evolved to meet the demand for staff training that has become critical at times of everlasting rapid changeable business environment. Downsizing has caused the remaining staff to take on more challenges. E-learning is cost effective and easily implemented. At the same time, companies have found it particularly useful in their efforts to maximize the capabilities of their staff during recession. One of the main reasons why e-learning is so capable of providing low cost learning solutions is its versatility. E-learning strategies include the following (however, this is not an exhaustive list):

- Webinars
- Video
- Interactive Simulations
- Games
- Case Studies
- Collaborative Learning
- Cloud Hosting for Optimized Resource Access
- Multi-Lingual Learning Solutions
- Opportunities to Integrate Traditional Learning

E-learning can be very useful for education of students in all types of corporations. E-learning is a method of education which includes self-motivation, communication, efficiency and technology. Different types of e-learning are based on means of communication, schedule, class structure, and technology that is used.
In a corporate context, the training can be defined as a way of transferring instructions, but individual learning is internal way of processing information into knowledge (Kirkpatrick, 1979).

Corporate e-learning

From the corporate point of view, there are several factors that must be met before the adoption of a solution and a plan for e-learning and they can be divided into several key areas. A comprehensive solution for e-learning involves three elements (Rosenberg, 2001):

- Content - Intellectual Property available in several formats such as text, video, audio, animation and simulation, and that should be:
  1) Delivered on time,
  2) Precise, focused on the important aspects in reasonable quantities, and
  3) Learning materials must be relevant and meet the needs of the students.

- Technology - Technology infrastructure plays an important role in corporate training and delivering content and skills through a variety of channels. Four technology types important for corporate e-learning are:
    1) Computer-Based Training (CBT) – Using Software for creating courses and lectures as multimedia mix of various facilities which are available to student on his/her computer or a local network.
    2) Web-based training (WBT) - Wider distribution of Internet has enabled the transition from the CBT to Internet. Hereby, the corporate education became geographically independent.
    3) Learning Management Systems (LMS) – Learning management software packages that enable the management of the delivery and tracking of learning and resources. Most of these systems are based on the Web and provide the access and administration at any time, anywhere where the students can register, follow the flow of courses, test students and the like.
    4) Learning objects - objects are software components with the reusability and the content units which can be drawn from one course to another and integrated with the possibility of modification. The contents of these objects are described using metadata making it easier to update and manage content, personalize, and improve interoperability.
- Services - Hosting Software for E-learning. Allow clients to access materials via Internet and administrators to modify their content.

E-learning tools

Open source software is often the first choice when the implementation of a learning management system into business organizations is taken into account. Moodle (Modular Object-Oriented Dynamic Learning Environment) is a free and open source platform for e-learning. It is well known software for this purpose, and is widely considered as fine solution both in university institutions, and in business. Moodle is a huge variable system for managing courses and learning that supports flexibility, personalization and product long life-cycle.
Moodle is designed according to pedagogical principles with the aim to enable teachers easily create online courses and user community for e-learning, but corporate use of Moodle in its original version is still somewhat limited (Elearnity organization, 2012). Because of availability of its source code it is possible to modify it according to the user needs.

4. Conclusion

E-learning was at one point set back by the advent of the Internet, which replaced traditional media learning with learning ”solutions” characterized by an abundance of various learning material which most often leads to confusion, slow connectivity, an absence of audio or video scripts and even limited static image quality.
Modern e-learning is quite the opposite, delivering media-rich and mobile-ready content across a variety of platforms. Career development now benefits from learning strategies which incorporate the best of both e-learning and traditional learning methods. E-learning platforms allow learning resources to be accessed globally and incorporate ongoing assessment criteria which provide an objective measurement of knowledge retention.
E-learning has also proved useful across a wide range of industries, from pharmaceutical to hotel management or office environments. Practical applications would include:

- Health and Safety Training,
- Industrial Machinery Simulation, and

- Digital Media Training.

Advancements in the technology of e-learning mean that, not only are users able to access wider and more comprehensive range of learning resources than has been previously possible, they are also now able to do so within an individually tailored time-frame that does not require professional downtime. The impact upon individual career development is significant, as learning can now be conducted alongside vocational career development for maximum benefit.

If the organization needs a system for simple management courses at no additional functionalities such as talent management and performance of employees, Moodle can be the best choice, while the more complex processes of e-learning need further investment and development of specific modules to meet a variety of organizational requirements.

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