

## APPLICATION AND USING CORPORATE LEARNING MANAGEMENT SYSTEMS IN IT COMPANIES

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**Abstract:** *Technological advancements and the growth of internet provide IT companies with new opportunities for sharing knowledge and using e-learning in corporate training. E-learning has become an important priority of corporate education, as a way to train and enhance employee value by combining different learning styles and delivery systems to create the best learning experience possible. One of the biggest challenges faced by IT companies today is finding the right Corporate Learning Management System (CLMS) for the administration, documentation, tracking, reporting and delivery of e-learning education courses or training programs.*

*This paper presents the results of a research study carried out in IT companies in Montenegro. The aim of the research is to analyze the application and the usage of educational technologies for training, e-learning and sharing knowledge. Special attention is given to the identification of key features that can help IT companies to create and implement appropriate CLMS for e-learning.*

**Keywords:** *Corporate Learning Management Systems, E-Learning, Corporate learning in IT companies*

### 1. INTRODUCTION

During the last fifty years, constant scientific and technological innovation and change has had a profound effect on learning needs and styles. Learning can no longer be divided into a place and time to acquire knowledge (school) and a place and time to apply the knowledge acquired (the workplace). [1] Currently one of the most challenging areas, when it comes to the need for continuous learning, is the area of information technologies.

Everyday development and progress of information technologies is forcing companies too constantly subject to changes and shifts in order to remain competitive in the market. The education of IT professionals, regardless of their initial quality, must be constant, so that the company is able to respond well to the challenges of competition. If a company has certified IT professionals, the period of adjustment to new technologies is significantly reduced as it reduces spending on ad-hoc outer IT support.

#### *Learning organisation*

In literature [2] [3] [4] [5] [6], the term “learning organization” is being used increasingly. According to one of the definitions [2], a learning organisation is “an organisation which learns powerfully and collectively and

is continually transforming itself to better collect, manage, and use knowledge for corporate success. It empowers people within and outside the company to learn as they work.” Terms “organisational learning”, “corporate learning”, “learning company” are also used in literature.

A large amount of scientists’ papers related to “learning organisation” topics can be found, as it has attracted the attention of scholars from disparate disciplines. In all of the examined literature [2] [3] [4] [5] [6] evident are the facts that a) many companies have noticed the commercial significance of organizational learning b) the transition from traditional to “learning company” requires structural and organizational changes at all levels within the company c) companies that strive to become learning organizations usually change their structures by creating smaller groups. Every group is responsible for self-development, collection and exchange of knowledge, as well as for organizing various courses within the company d) learning company specifies certain amount of time to be used for self-development of employees. Most often it is 10% or even 50%, depending on the position that the employee covers e) employee training is linked not only to better job performances but also to its motivation, ambition, overall satisfaction, commitment to work and competitiveness on the market;

This paper is structured as follows. In section II we present new approaches to learning and development in IT corporations. In section III we introduce data and methodology used for research study carried out in IT companies in Montenegro. Section IV consists of authors' discussion on the research's results and identified key findings. Section V is the conclusion of the paper.

## 2. NEW APPROACHES TO LEARNING AND DEVELOPMENT IN CORPORATIONS

The rapid technological development has made an impact on not only business and science, but on our learning process as well. Consumers are used to having the latest products available "just in time", as well as having on their disposal the latest upgrades and improvements. In order to fulfil the market demands, companies must look for an equally rapid way to overcome the obstacles they come across.

In the introduction we pointed out why corporations need to invest in learning and training of employees, and how important it is in terms of keeping track with the market. However, understanding those needs is only the first step. The real problems arise at the stage of selection of the most efficient and appropriate method for learning and development.

Traditional learning methods have become insufficient to respond to the mentioned challenges, so companies try to look for more up-to-date and more efficient ones. It can be argued that corporate learning is in the process of transition. That being said, the optimal solution is yet to be found, but the direction where it is going is e-learning. The evermore frequent use of internet technologies in the learning process is justified by the following:

- It does not require for employees' absence from work;
- It enables the creation of an internal knowledge base;
- It enables the practical implementation of newly acquired knowledge;
- It saves space and human resources;
- It connects people, knowledge and information, regardless of sociodemographic differences;

In addition to that, Henley Business School issued its annual Henley Corporate Learning Survey report. The aim of this research was to determine trends in learning and development methods that can help achieve business goals. [7]

According to the report, "Coaching is most likely to be identified as the 'preferred' learning method for senior executives and for high potentials". Further, "Blended learning (part online, part face-to-face) is a planned activity by over half of respondent organisations during 2015, as is individual online learning."



**Image 1:** Learning and Development method growing and declining over the next two years, based on [7]

Based on [7], eLearning courses are expected to grow by 59%, while in-house development programs are anticipated to grow by 53% over the same period.

### *Corporate learning management systems*

ELearning as a term is globally used to describe an environment in which we use web-based technologies as a support to learning processes. ELearning systems / platforms can be classified based on the purpose and ways of using. As of that, you can choose to use eLearning tools to support training over education. "The basic difference between the two is that training is more mechanical, more to do with compliancy and the proven demonstration of skill sets. Education is a broader term, more associated with the act of learning having been facilitated rather than skills which have been taught" [8]. The need for employee training, employee orientation, knowledge retention, practical skills and education forces most of companies (74 percent of companies in USA [9]) to implement those "training focused" tools called Corporate Learning Management Systems – CLMSs.

"A CLMS is a software application for the administration, documentation, tracking, reporting and delivery of e-learning education courses or training programs" [10]. Corporate LMSs are used to provide centralized sources of information and educational materials which can be used in creating an internal knowledge base. They support blended learning and provide services for tracking participants' progress. One of the facts that contributes to the obvious benefits of using CLMS in business environment is a recent estimate that the value of LMS market is to grow up to 8 billion dollars by 2018[11].

There are a lot of free, open source CMLSs that are widely being used. Some of them are: Moodle, ATutor, Eliademy, Forma LMS etc. Based on [12], some of the most popular commercial corporate LMS's are: 24x7 Learning Learn Trak LMS, 4system WBTSerVer, ABSC tūtis LMS, Accord LMS etc.

## 3. RESEARCH

The purpose of this research is to analyze the application and the usage of educational technologies for training, e-learning and sharing knowledge in Montenegrin companies. In addition to that, the research sought to discover models of education used in IT companies, which learning practice employees enjoy the most, what is the awareness level of online educational tools, do they use any of the existing CMLS, whether the companies allocated budget for education and if they did, how much did they allocate.

The survey was conducted in August 2016. An online questionnaire was created, using free web tools and it is available at address [13]. The results of the questionnaires were analysed using SPSS version 20.

The questionnaire was emailed to 40 addresses (40 leading IT companies in Montenegro). Of the 40 questionnaires sent, 28 was answered (70 percent). The main business activity of the majority of the companies was software development (50 percent), software development and hardware distribution (36 percent), with a further 14 per cent in telecommunication services. The majority of the companies are small sized firms – 53 percent have less than 15 employees, 36 percent have more than 30 employees and 11 percent are medium sized, counting 15 to 30 employees.

The most prevalent job title is that of low-level IT executors (43 percent), 26 percent are owners of the companies, 21 percent are managers, and the remaining 10 percent are directors and general managers.

The turnover for the last year of the respondent companies was as follows – 21 percent less than half a million €, 18 percent 0.5 – 1.0 million €, 21 percent over 1m (all of them were companies that provide telecommunication services). Still, 40 percent of respondents (all with low-level hierarchy job position) didn't have the information about yearly turnover. In addition, 36 percent of companies in the previous 2015 year, allocated up to 5,000 € budget for education of employees, 18 percent from 5 to 10,000 €, 18 percent over 10,000 €, while the two of companies did not have any investment in this field. 24 percent of respondents did not have this information.

### Limitations

Potential threat to the success of this reserach could be the quantity of the collected data. Also, the questions related to the budget and profit were answered by employees with different levels of hierarchy, i.e. the significance of the respondents, who had no answer to the issues in this regard.

In chapter IV we will focus on analysing data which are significant in the context of employees' corporate learning and training experience, their education and its importance.

## 4. FINDINGS

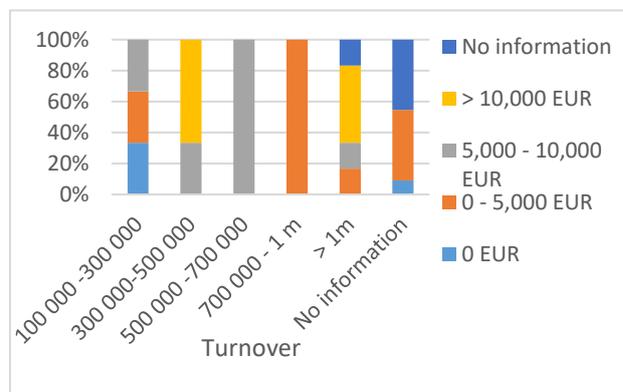
The first objective of the survey was to determine which training methods are practiced in Montenegrin companies. Further, we wanted to note the main resources employees are using when they have obstacles with resolving business tasks and which are their preferred learning methods. As of that, only one company practices the traditional way of educating, 3 of them use direct communication with colleagues and the rest (75 percent) are mixing these two methods along with taking online seminars and courses. When it comes to ways of learning that an employee prefers, the dominant method is "learning through practice" with 40 percent, followed by online seminars with 32 percent. The remaining 28 percent covers traditional ways, as well as individual and

group trainings. When dealing with task resolving problems, employees are: asking for help from colleagues (89 percent); searching for answers on the internet (85 percent); looking up in companies' internal knowledge base (46 percent).

With detailed analysis of the above mentioned variables, as well as their crossing with an annual turnover and budget we come to the following conclusions:

- The companies are excluding traditional ways of learning as the only methods of education, turning more and more to modern ways.
- ELearning is present in most of companies, but it still has not completely replace other methods of acquiring knowledge and practice.
- Large number of companies considers "direct communication with colleagues" as a form of education. This can be problematic in terms of understanding the concept of "professional education and training", and distinguishing it from internal training. On-the-job daily experience is important but it cannot be classified as formal training. Certified knowledge and internationally recognized licenses are those that make the company competitive and qualified on the market. Training and retraining is necessary not only for personal but for organisational growth as well.
- Regardless of the amount, the largest part of the budget for education is allocated for online seminars / courses.

Chi-square significance tests were used to test correlation between the annual turnover of companies and the amount of the budget they invest in training their workers. The correlation coefficient obtained by this crossing was 0.011 ( $p < 0.05$ ). Research showed that the budget for education depends on annual turnover, and vice versa. The more money business invests in education, the greater the company's profits. However, in order for an investment to be profitable, it must be thoroughly planned. A good investment is one that has been planned both in accordance with market requirements and capacities and needs of employees.



**Chart 1:** Correlation between turnover and budget invested in employee education in Montenegrin IT companies

When it comes to plans for the implementation and organization of professional training of employees for the

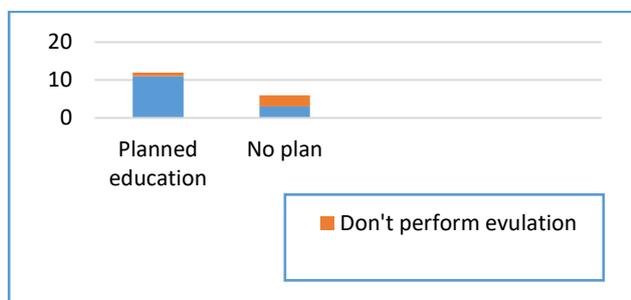
2016 year, 43% of companies said they have specified plan, as opposed to 32% of companies that do not.

Significant is the fact that one-quarter of respondents (all employees at lower level hierarchy) is not familiar with the existence of plan for training. Regardless of whether the company is planning the allocation of funds for education or not, every worker should have that information in order to: a) have a clear picture of their position within the company; b) be able to plan further training on personal liability; c) be able to adjust their own interests to the needs of companies / markets. All this can affect employee's job commitment, motivation, ambition, attitude, performance and, in the end, efficiency and overall progress.

Based on the estimated capacity of workers, managers should define the necessary courses that each employee is required to attend. The survey found that all of the respondents spend some time on acquiring new knowledge. 68% of employees spend quarter of their work time on gaining necessary knowledge, 21 percent up to half time, while 11% spend more than four hours in office acquiring new knowledge. Further, even 96 percent of respondents devote some private time to acquire new knowledge that can help solving business tasks.

Research also found that one-third (33 percent) of companies do not perform evaluation of employees in the form of controlling and monitoring the quality of work and progress. A question arises on how adequate is a plan that had not been designed through consultation with employees. Cost effective plan is a plan that will, in the long run, save money as well as time. The progress evaluation of those working as well as their needs are closely related to the direction in which professional development should go to.

In attribute to that, it was hypothesized that the companies that carry out the evaluation of the employees have created a training plan of those working for the current year. A high correlation was obtained by crossing these two variables (Chi-square significance tests with correlation coefficient of 0.018), which means that the planning of the budget depends on the internal evaluation and vice versa. Companies that perform evaluation make a planned investment in education which, in the end, has positive influence on the turnover.



**Chart 2:** Correlation between planning education and evaluating employee progress

Apart from the need for the continual trend tracking, another challenge that each IT company faces is the integration of new employees. In reality, a mentor is usually assigned for the rookies, one that is in charge of

training and introducing the new employee to the system. This approach is potentially risky, seeing as the time spent for mentoring may affect other tasks, deadlines and by that, profits. One of the ways to avoid the above mentioned risks may be the creation of an internal knowledge base.

A well-organized knowledge base can save companies' money by decreasing the amount of employee time spent trying to find certain information. It can also be used to give customers easy access to information that would otherwise require contact with the organization's staff [15].

Research showed that 71.4 percent of companies do have some kind of knowledge base, but as much as 44 percent of employees don't use it when trying to resolve a business task. Taking into account the fact that 78 percent of companies said they have some kind of platform for exchange of knowledge, the way they are used and implemented is questionable.

## 5. CONCLUSION

Intellectual capital is the total knowledge of employees that is being used in the process of creating market value. The increasingly rapid development of various educational trends has its roots in the following: a) development of technology and changes in the business world require new and contemporary skills, knowledge and education; b) for a company to survive and grow, professionals are essential.

For a high quality education of human resources, companies need solid organization and coordination of the chosen programme for education. The programme has to enable learners to learn without unnecessary setbacks, large difficulties and serious obstacles. In addition to that, it has to be efficient and fast enough to enable learners to respond to business challenges on time. It is extremely significant for the learners to know what objectives they are expected to reach during the training and upon its completion.

This research has analysed application and using of educational technologies for training, e-learning and sharing knowledge in Montenegrin companies. The overall conclusion is that Montenegrin companies do not perform at a satisfactory level when it comes to the implementation and usage of contemporary methods of education and learning. Problems are reflected in the lack of harmonization of planned education with the needs of the market and of the employees. In addition to that, there is an unnecessary gap in sharing information amongst the employees that are at higher levels of hierarchy. Companies are aware of the importance of education and of the tools used in the process, but they still fail to subject to the necessary structural and organizational changes.

This paper is doing pioneer work in the field of research referring to the education of employees and it may present a basis for further research on this topic. The gathered data may serve as a starting point in future research referring to employee management, development strategy etc.

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