

E-LEARNING IN THE MANAGEMENT OF POLISH COMPANIES

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Abstract: E-learning, or to put it simply learning through the Internet becomes in Poland more popular every year and managers of companies increasingly opt for conducting courses for their employees with the use of this method of knowledge transfer. Many advantages, which influence this view, can be underlined. First of all, it is far cheaper than the organization of conferences and training for a large group of people at the same time. The article presents the benefits of practical use of e-learning for business owners in their own companies. On the basis of own research, the impact of technological progress into the training and development of staff in Polish enterprises has been presented as well. In addition, the article contains description of the way Polish employers use new technologies in learning, which forms are currently used and which methods do they plan to use in future.

Key words: management; Internet; e-learning; companies.

Introduction

In the last two decades, new technologies strongly penetrated our lives affecting how we communicate, how we establish and maintain relationships and how we spend our free time, learn, or work. The Internet, in addition to access to water, electricity, gas, television, became for us such a fundamental good that we can not imagine life without it. We are surrounded from all sides - our private lives often move to the Web, where we maintain contact via social media, talk, and exchange files. Professional relations are also often taken by the Internet. Daily use of the Internet and the way we do this, influenced new habits such as unlimited asking of questions, looking for quick answers, following what interesting for us. Proper use of these new powers in the development processes of employees seems to be something quite natural (Sroka, 2014).

The Internet as a Basis for the Development of E-learning

Enormous important for the development of the Internet was the development of the Internet program called the World Wide Web (*WWW*) by Tim Berners-Lee (Tim Berns-Lee was an employee of Swiss physics center CERN. Increase in popularity of this program was waiving by the author the copyrights, including royalties). It was a hypertext, multimedia, network information system based on publicly available, open IETF and W3C standards. The original, and currently still the primary, task of the *WWW* is to publish information. *WWW* is often mistakenly equated with the entire Internet; in fact, it is only one of the most popular services.

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Figure 1 presents data on the scale of Internet penetration in different regions of the world.

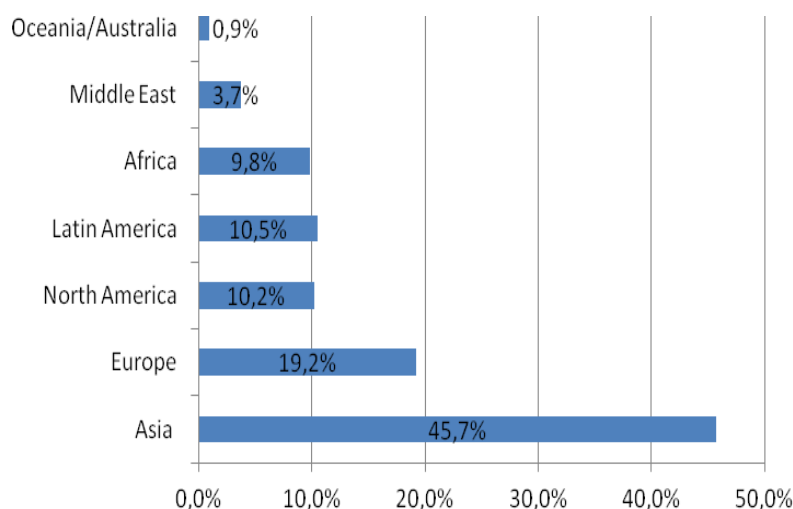


Figure 1. Internet penetration in different regions of the world (*Internet World Stats, 2014*).

If the number of Internet users in absolute terms is considered, the largest number of them live in Asia, however the percentage of Internet users in the continent's population ranks Asia just before Africa. The highest percentage of residents use the Internet in North America and among the small populations of Australia and Oceania. In 2012, the Internet was used by 2.3 billion people - about 32% of the population of the whole world (7.2 billion people). By 2017, the number of Internet users will reach 3.6 billion, which will represent more than 48% of the population of the world - with the projected world population of 7.6 billion.

In addition, growth forecasts for Poland assume that in the period from 2012 until 2017, IP traffic will double, reaching an annual growth of 19%. In the same period, the movement in Polish mobile networks will increase tenfold - with the annual growth to be 59%. By 2017, the number of devices connected to the network in Poland will increase from 95.8 million in 2012 to 145.5 million. Data transfer in Poland related to video services (including the business and consumer sector) will constitute 56% of all traffic on the network in 2017, while in 2012 this figure was 41%. According to forecasts, in 2017 personal computers will generate 72% of the traffic in IP networks, TVs - 10%, mobile devices, including tablets and smartphones - 16% and M2M modules - 2%. In Poland in the period from 2012 until 2017, the average broadband bandwidth will increase 3-fold, from 9 Mb/s to 28 Mb/s (*W 2017 roku blisko..., 2013*)

These projections provide a basis for the assumption that the market for e-learning in Poland will grow rapidly and more and more traditional learning methods will be replaced by conducting courses and studying practically right from your desktop.

Today, we are witnessing a change in the organization of the world economy, which is due to simultaneous interdependent processes:

- the technological revolution, based mainly on information technology,
- the formation of the global economy,
- change of development paradigm, involving the transition from an industrial to an information economy, knowledge-based economy (Zaorska, 1998; Castells, 1994).

Knowledge-based economy

Today, in all areas of our life - social, economic, and financial - there are constant changes discussed in terms of the dynamic process of continuous "becoming". As rightly pointed P.F. Drucker, the only sure thing today is change - you can only try to anticipate and prepare for the coming change (Drucker, 2000). Information - seen as a strategic economy resource is inextricably linked with the changes taking place in the modern world (Dziuba, 2000). The flow and use of information is possible by modern technology, especially information and communication technologies (ICT - Information and Communication Technology). Information is, however, a common denominator of most of the terms describing so-called "information society", the concept of which is believed to be the foundation of these changes (Smarandache and Vlăduțescu, 2013). Knowledge society is a society that identifies produces, transforms, disseminates and uses information to build and apply knowledge for human development. Such a society contains a vision of pluralism, cohesion, solidarity and participation. The concept of "knowledge society" is thus broader than the concept of technology and access to networks that dominate the discussion on the information society (*Towards Knowledge Society*, 2005; Farkas and Torok, 2011). The idea of an information society is based on technological inventions. The concept of the knowledge society includes more dimensions: social, ethical and political. Information is a tool for generating knowledge, but it is not the knowledge itself. Information is linked with time, can be fresh or not. Therefore have the characteristics of the product, so it can be sold and purchased. On the other hand, knowledge belongs only to the people. Knowledge is more than just another factor of production, is part of the restoration of production factors and the connecting factor of other means of production. Thanks to the knowledge, we have new manufacturing opportunities. It is also the factor affecting the effectiveness of other factors. It has specific characteristics, is an "elusive" and hardly definable resource. It can be understood in a broad sense as a collection of information, views and beliefs, which have assigned cognitive or practical values. In a narrow sense is usually reliable information about the reality

along with the ability to use it. This narrower approach is equated with scientific knowledge (Makulska, 2012).

In the knowledge society, everyone should be able to move freely in the resources of information. Freedom of movement is based on the development of critical thinking in order to distinguish between information that is useful and worthless (*Towards Knowledge Society*, 2005). Although equating the level of science with the level of development of a knowledge-based economy is wrong, both concepts have many in common.

As already mentioned, one of the interdependent and simultaneous processes influencing the change in the organization of the world economy is a technological revolution, mainly based on information technology. It also affects the method of obtaining information resources such as general knowledge and professional skills.

New Technologies in Learning

Generally available information and communication tools affect our lifestyle, ways of spending time and contacts and ties with others. It also determines our training, acquisition of knowledge, and the sphere of work. E-learning platforms, web 2.0 solutions, geolocation, touch technologies and interactive mobile devices, screens, gesture control, the possibility of contactless payments (*Millward Brown*, 2011), supported by the social and cultural change, not just change the dimension of business communication, but also an approach to training and communication and knowledge management in a company. Learning model in which each person shares with others his knowledge and experience is used increasingly often. An important role is played by social networks which are more often used to implement social learning and mechanisms to publish its own content in open or closed systems, on-line, such as Wikipedia, the blogosphere and crowdsourcing (referred to as Web 2.0) (*The Ken Blanchard Companies...*, 2011). The application of the above-mentioned mechanisms by companies affect achieving business benefits, among which the most important to be considered are: increasing the speed of reaching knowledge, reducing the costs associated with communication, shortening the path to reach the expertise and reduce costs associated with business travels (*Business and Web 2.0...*, 2013). Many proponents of the use of social mechanisms of learning in organizations can be found among the new generation of workers that are born after 1980. The consequence of these changes is the gradual transformation of the learning model from push, in which the development process is pre-defined and enforced, and the participant forced to participate in it, to pull, where the participant himself take responsibility for his own development and he reaches for implementation tools. Increasingly, also we do not need to search for information but properly organized and processed information finds us. Such technologies as the Web 2.0, RSS feeds, tools to easily share knowledge and bring together people with similar interests help to do it. World contains a huge amount of digital information, which is obtained faster and in an increasing extent. This makes possible to do a lot of things that have not could be done before. This

information can be used to determine the business trends, prevent diseases, in the fight against crime and so on (*Data, data everywhere...*). This multiplicity of information allows us to not only to interpret the reality around us, but also for a different way of acquiring knowledge. We are dealing with the "googlization of world" - as a humanity asking this modern oracle tens of billions of questions per month, we do not realize that changing your skills associated with remembering information (i.e. "Google effect"). Nowadays, saving information important for us in memory becomes less significant and on the other hand the ability to restore, where the content can be rediscovered becomes more valuable (Sparrow et al., 2011; Tabor, 2014). Technological progress and changes, which influence the world, force the continuous development and updating of people's knowledge. In recent years, the idea of lifelong learning with its emphasis on the need for continuous improvement of the knowledge, regardless of age has gained great popularity. Unfortunately, Poland has one of the lowest rates of adult participation in lifelong learning (for example, in 2010 the percentage of Poles aged 25-64 who participated in continuing education amounted to 5.3%, while at the same time, this number for the whole EU was at 9.1%). Companies, which do not provide education possibilities for workers, indicate as reason excessive costs of training and claim that qualifications of staff are sufficient for the needs of the company. In order to alleviate rising costs of training, institutions offer a variety of programs funded by the European Union. Ignoring the need to invest in the development of human capital can contribute to the lack of competitiveness of enterprises (Bagieńska, 2007).

In modern times, with rapid changes under way, knowledge is one of the main economic resources. Companies need to transform into a knowledge-based organizations, i.e., those that deal with creating, storing, distribution and use of valuable information. Challenge is to attract and retain competent employees, which requires their continuous development and constant awareness. In contrast the task for companies is to create conditions for development for workers, and the development should be planned and linked to formal career paths (Juchnowicz, 2010). When analyzing the data related to Polish companies it can be concluded that not all companies operating on the domestic market, appreciate the importance of investing in employee development. According to a study published in the report of the Polish Agency for Enterprise Development (PARP), only slightly more than half of Polish companies (55%) in the past 12 months, led any development activities for the improvement of skills of their personnel. Enterprises employing between 1 and 9 people and those that employ more than 1,000 people invested most in training per employee. According to the PARP report average costs for employee development amounted to approx. 46 EUR (Worek et al., 2010). Modern technologies have an impact on all areas of the life of modern societies, including the sphere of development of employees' competences. This is related to the more widespread use of e-learning, defined as any action based on modern technologies using IT achievements that support employee development process. Employers

investing in broadening of knowledge of their employees are not limited only to the traditional, stationary training conducted in the hall by the coach. Apart of them, they have a choice of a number of methods based on solutions unknown by now. These include, among other tools such as video conferencing (a form of communication based on the audio and video transmission, two-way exchange of information that allows two or more persons in different locations), webinars (a form of remote communication implemented in a one to many model, but it provides the mechanisms in place to work with a seminar group). What is more tools such as Wiki (websites allowing for the collective development of the content on a given topic, where each user of the Web site may propose its own fragment (e.g. the article) to publish and develop its content), Webcast (videocast or audiocast – form of short, usually a few minutes' electronic content published on the Internet to self-check in the asynchronous form). Additionally a virtual library of knowledge (places in the network for delving into content in structured and verified by appropriate people resources, which usually contain effective mechanisms for searching, and allowing to quickly reach the interesting elements), discussion forums (a form of asynchronous text communication implemented on the Internet, which allow to group opinions in discussion threads. Forums in training are often used to ask questions, explain the problem, and share of experiences). According to research conducted by Cegos Group (*Training Today, Training Tomorrow*, 2011). European companies use modern technologies in the development of employees more and more often. Also in the US and Asia, the increasing use of e-learning has been noticed. However, the capacity of Africa remains the biggest barrier. Although the training is still the most commonly implemented in the form of traditional activities, at the same time, an increase in the use of e-learning and blended learning, combining modern technologies and full-time courses has been observed (Figure 2).

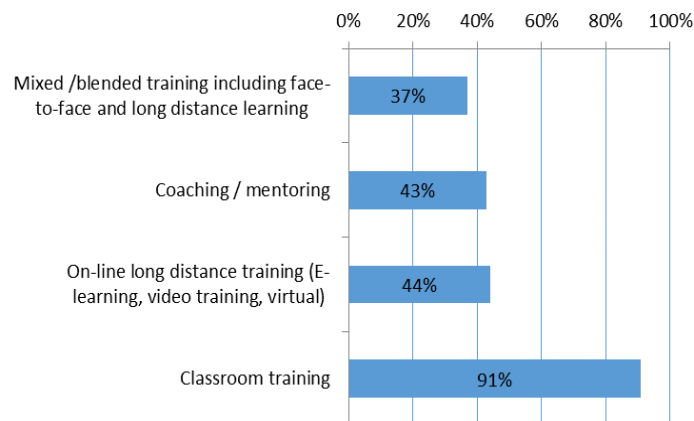


Figure 2. Modes of learning used by trained employees in Europe (*Training Today, Training Tomorrow*, 2011)

Interest in e-learning is growing because of the many benefits to the organization resulting from the use of development forms based on new technologies. The three most common notable are: reducing the cost of training delivery, shortening the time of their implementation and shortening the time required to transfer knowledge and build competence among the employees (time-to-competency).

The study of Cegos Group adopted the following distribution methods based on modern technologies used by the researchers: e-learning modules, virtual classrooms, game serious (science based on the game), mobile learning (learning using mobile devices).

Figure 3 shows that more than half of those trained in Europe used the informal learning tool. It turns out that the most commonly used solutions were videoconferencing (33%). With a little less intensity used tools such as wikis, blogs, forums and podcasts. Relatively small, only 20% use of these tools indicates that companies are still testing them. However, this may change with the advent of open-source and free software.

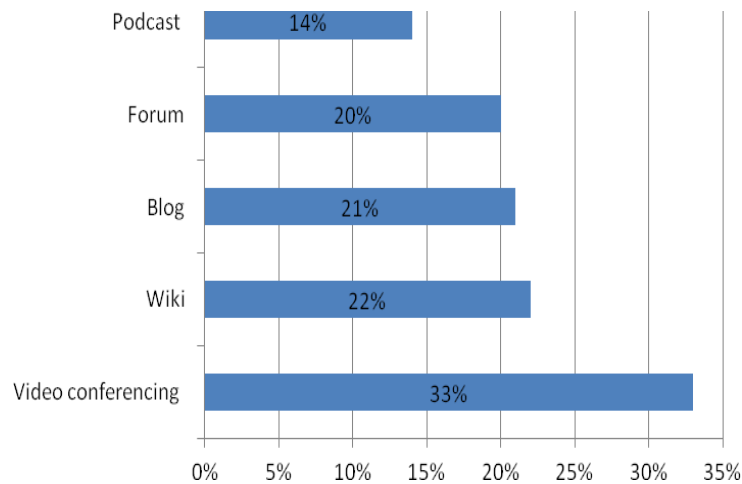


Figure 3. Collaborative tools used by trained employees in the last three years
(*Training Today, Training Tomorrow, 2011*)

For some time also in Poland, studies that demonstrate how to use modern solutions in the development of employees are conducted. E-learning is an area which becomes better known and more widely used in Poland. Recently individual studies, which show the development of certain trends in selected thematic areas, are carried out in the market. Eurostat also provides some data. They show the year-on-year increase in the number of Poles using the Internet. In 2010, there were 54% or about 4% more than the year before. More than one-third of Poles in that year at the age of 16-74, look for information on the Internet in order to broaden their knowledge/skills (by 2% more than in the previous year) (*Eurostat*). In

Poland, still a significant problem is the availability of broadband Internet and computers (according to a study by the Economist Intelligence Unit, Poland was among the developed countries in 2009, 31 position in terms of access to broadband Internet and 40 in terms of access to computers). It is also worth noting that in Poland, people face analogous economic and social challenges as in more developed countries. These problems should be depopulating labor market, managing the potential of older workers, or the need to build efficient mechanisms for retraining so-called reskilling (*A silver opportunity?* 2011).

The Use of E-learning in Polish Companies

According to research conducted by the XY Learning Team, even in times of economic downturn, with limited budgets allocated to staff development, corporations are trying to take care of the potential of their staff. Reduced outlays for this purpose result in the need to optimize the development activities. Organizations are looking for alternative sources of financing courses, using EU funds or engaging internal trainers. Organizations operating on the Polish market are aware that investing in knowledge and skills is the best way to achieve business success.

Extremely relevant conclusions can be drawn from the analysis of the Report of Management Observatory "*New technologies in learning*", which presents the degree of popularity and use of e-learning by Polish companies. This report summarizes the results of a survey of 276 Polish companies. The respondents were representatives of companies, who are the decision-makers in the selection of themes and forms of training.

E-learning strengthens its position in the Polish market. The most frequently chosen form of e-learning courses are now audio and video recordings used by 65% of companies (out of 276 participants in the study). Immediately behind are webinars chosen by almost half of companies (48%). This trend continued in 2014. Employees of companies also currently carry out more and more training - 42% of surveyed companies declare that creates educational content on the site, in response to specific needs. This is a big change compared to the previous year, when the training was mainly purchased as ready-made modules. In 2013, the market has also experienced shrinking training budgets, despite earlier statements that the budget for e-learning will grow. Therefore, companies began to look for cost optimization. And since one of the main advantages of e-learning are lower costs of creating and delivering training (which noted 38% of companies), companies turn their attention to this form of learning to a greater extent than in previous years.

In 2013, still the most popular were traditional training both in the form of an active workshop (90% of respondents), as well as the classic lecture (80%). The percentage increase showing the use of forms of e-learning is much greater than the increase in the use of traditional training.

Therefore, while traditional methods have still a strong position, it can be said that the e-learning forms are catching the distance between them fast.

Among the e-learning forms the most popular in 2013 were audio/video recordings (65%). Their rise in popularity compared to the previous year is significant - as much as 33%. This probably results from the fact that training in the use of audio and video recordings are easy, quick to prepare and distribute, and do not cost much. Firms observe these advantages and reach for this form of training of their employees more willingly.

Micro companies mostly as a form of training indicate audio/video recordings, and webinars. Both the audio/video methods and webinars offer the possibility of implementing training without having to incur additional costs. Therefore, are selected by companies more frequently. Employees participate in them, at any time and from anywhere, so the company does not have to pay for room rental or incur costs associated with travel. In addition, training materials are constantly available and can be used repeatedly in order to consolidate the acquired knowledge or remind it. However, in the case of large companies the second most frequently chosen form of training (after the audio/video recordings) are multimedia training on LMS platform (51%).

Above-mentioned study indicate that the way companies find e-learning content in 2013 have changed. This year, e-learning was mostly created on the spot, in response to the specific needs of companies (42% of companies). In the previous year e-learning content was most often bought as a ready-made modules (38%), while in 2013 this way of obtaining content has been chosen only by 28% of companies. Creating e-learning content has been also contracted out, but often only in terms of the development of the technical basis of the provided content (19%).

Whether the companies use blended learning, which combines training of traditional methods with e-learning was also checked. It turned out that 2/3 of surveyed companies use in their courses blended learning. These results indicate that the Poles are becoming leaders, because according to survey of Professional Training in Europe conducted in April 2012 by CEGOS use of blended learning in the UK was at 50%, in Italy at 48%, and in Spain – at 43% level.

Polish companies have recognized active/workshop methods to be the most attractive to participants. When it comes to e-learning, surveyed companies indicated playing games and computer-aided simulations (29%) as the most attractive for participants. Previous year results were similar. The second of traditional forms of training – lecture was indicated as the least attractive to participants (58% of responses). In the context of e-learning forms, multimedia CD/DVD was assessed as the least attractive form of training (18%). At the same time, respondents as the most attractive identified none of these forms.

Regarding the effectiveness of knowledge transfer, the vast forefront of training are active methods - as much as 55% of responses. The same situation was in the previous year, where as many as 58% of respondents considered it to be a very effective method of knowledge transfer. Among the e-learning forms, it is a game and computer-aided simulations which have been recognized as one of the most successful in the transfer of knowledge (20%), other forms of training received

much less indications. Half of the surveyed companies recognized training in the form of a traditional lecture as the least effective method in knowledge transfer. Another studied feature was the cost of training. It turns out that webinars (19%) and traditional training in the form of lecture (18%) are regarded as the cheapest methods. The subsequent positions were taken by multimedia training on LMS platform, audio/video recordings (16%) and multimedia CD/DVD training (14%). The most expensive for companies are active methods/workshop (37% of responses), and the e-learning forms - games and computer-aided simulations (21%). It is quite surprising result since both lecture and workshop require similar funding, and have been assessed so differently.

Summary

E-learning as a modern form of training is nothing else but a consequence of the changes observed in the world. Organizations operating on the Polish market are aware that investing in knowledge and skills is the best way to achieve business success. As the available evidence suggests e-learning is becoming increasingly popular in Poland and is increasingly used by Polish companies. Although companies do not abandon traditional training (mainly large enterprises, which are still the greatest investors in traditional forms of training). It also turns out that Polish companies are increasingly turning to combined forms of traditional and e-learning methods, which is blended learning. Advantages such as low cost of training production, and the opportunity to learn at any place and time makes modern companies to usually choose e-learning in the form of audio and video recordings, and webinars. Additional saving is the lack of organizational costs (room rental, food, travel, etc.). In addition, no need to leave the workplace during the training period. There has been a huge change in terms of acquisition of training content by companies. While training last year were mostly purchased as ready modules, currently firms opt for their creation within the company in response to emerging needs. Observed reduction in training budgets may also be of great importance in this trend.

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E-LEARNING W ZARZĄDZANIU POLSKIMI FIRMAMI

Streszczenie: E-learning, lub ujmując to po prostu nauka przez Internet staje się w Polsce z roku na rok coraz bardziej popularny i menedżerowie firm coraz częściej wybierają prowadzenie kursów dla swoich pracowników z wykorzystaniem tej metody transferu wiedzy. Wyszczególnić można wiele korzyści, które mają wpływ na ten pogląd. Po pierwsze, jest to rozwiązanie o wiele tańsze niż organizacja konferencji i szkoleń dla dużej grupy ludzi w tym samym czasie. Artykuł prezentuje korzyści wynikające z praktycznego wykorzystania e-learningu dla właścicieli przedsiębiorstw w ich własnych firmach. Na podstawie własnych badań, przedstawiono również wpływ postępu technologicznego na szkolenia i rozwój pracowników w polskich przedsiębiorstwach. Ponadto artykuł zawiera opis sposobu, w jaki polscy pracodawcy wykorzystują nowe technologie w nauczaniu, które formy są obecnie stosowane i z których metod planują korzystać w przyszłości.

Słowa kluczowe: zarządzanie, Internet, e-learning, firmy.

E-LEARNING波蘭公司管理，在

摘要：電子學習，或簡單地說，通過學習在波蘭，每年更受歡迎的互聯網變得和企業的管理者越來越多地選擇開展為員工課程，運用知識轉移這個方法的。許多優點，它影響這一觀點，可以強調。首先，它是遠遠超過會議的組織和培訓，同時一大群人便宜。本文介紹了實際使用電子學習的企業主在自己的公司帶來的好處。對自己的研究的基礎上，為工作人員在波蘭企業的培訓和發展技術進步的影響已經表現為好。此外，文章包含波蘭雇主使用新技術的學習，形成目前正在使用的，哪些方法做，他們計劃在未來使用的方式描述

關鍵詞：管理;互聯網;電子學習;公司