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## Iryna Lytovchenko

National Technical University of Ukraine  
Igor Sikorsky Kyiv Polytechnic Institute  
irinalyt@ukr.net

## Olena Terenko

A.S. Makarenko Sumy State Pedagogical  
University  
eterenko@ukr.net

## Olena Ogienko

A.S. Makarenko Sumy State Pedagogical  
University  
el.ogienko@gmail.com

# Use of Project-Based Learning of Adults at Corporate Universities in The US and Canada

### ABSTRACT

**Objective:** The article defines features of formation and development of corporate universities in the USA and Canada.

**Methodology:** The article analyzes the dependence of successful functioning of the corporate universities on the choice of adequate training technologies; explores the essence and potentials of project-based learning as action learning which is focused on personnel development, business development and effective management of changes.

**Findings:** There is a close relationship between the performance of the functions of the corporate university and the forms, methods, learning technologies that are used in the learning process. Project-based learning is widely used in corporate universities in the United States and Canada; it provides an opportunity to gain managerial experience in real time, solves an important task of personnel development – formation of the ability to learn.

**Value Added:** The results of the research give ground to conclude that the corporate university in the US and Canada is a structural unit of a company, which performs certain functions that promote business efficiency.

**Recommendations:** The project topic should be related to current or future changes in the company. The solution of the problem should include diagnosing of the problem, analysis, recommendations, implementation phase, as also cooperation with members of the company.

**Key words:** project-based learning, action learning, adult learning, corporate university, employee development, business development, change management.

**JEL codes:** I25, F63, O19

## Introduction

Globalization processes became the main challenge for the development of modern society in the 21st century. It is perceived as standardization, economic integration and cross-cultural interaction. Globalization has a significant impact on the development of education. Characteristic features of the globalization of the educational space are: the growth of the demand for high quality of education, the unification of knowledge, the desire of countries to achieve high indicators of quality of education, diversification, introduction of innovations in the educational process, the growth of educational budgets, etc. This requires rapid adaptation and significant changes in traditional higher education systems. However, higher education institutions slowly react to the demands of time in order to successfully compete in the education services market. At the same time, the growing role of intellectual capital in modern corporations leads to the need of their transformation into learning organizations (Allen, 2010, pp. 48–53). Today leading corporations spend significant resources on vocational training and staff development – from 2% to 10% of payroll (Frazee, 2002). Corporate staff training is a key to success and competitiveness of companies. A special role is played by

corporate universities – a new type of educational institutions that aims to fully and effectively meet the needs of a particular corporation in development of professional competencies of employees closely associated with the company's development strategy. Over the past decade, there has been a trend towards a rapid increase in their number worldwide, especially in the United States, where from 1997 to 2007 the number of corporate universities doubled: from 1,000 to 2,000. In the world there were 4,000 of them and their annual budgets were large (Kolo, Torres, Bhalla, Strack & Cavat, 2013). Such growth is caused by changes in business environment, complication of technologies, changes in the demographic situation, and the growth of demand in the education market.

A study by the U.S. Department of Education with the Bureau of Census, determined how training impacted productivity. The results showed that increasing an individual's educational level by 10% increased productivity by 8.6%; increasing an individual's work hours by 10% increased productivity by 6.0%; and increasing capital stock by 10 percent increased productivity by 3.2% (US Department of Education, 2003). It should be noted that the organization of the learning process at corporate universities in economically developed countries is quite varied and depends on the dominant models of company management, geographical, cultural, economic conditions of a particular country, etc. In this context, of special interest is the American model of the corporate university which is used in many countries, particularly in Canada, and is based on project-based learning. In view of the importance of the problem and based on the analysis of activities of corporate universities (of such companies as General Electric, General Motors, McDonald's, Motorola, Sun Microsystems, Xerox, Disney, Shell, BAE Systems, Caterpillar, Ford Motor Company and others) we aim to determine the features of learning at corporate universities in the United States and Canada; to reveal the essence and potentials of project-based learning as action learning that focuses on both staff development and business development, as also on effective change management.

## Corporate universities of the US and Canada: preconditions and stages of development

The formation of corporate universities began in the early 20th century in the United States, when General Motors Company in 1927 first opened the General Motors Engineering and Management Institute (now Kettering University) for training and development of its employees. For a long time, the corporate university was considered an exclusively American phenomenon (Prince and Beaver, 2001, pp. 189–199). The number of corporate universities in the United States started to grow rapidly at the end of the 20th century: from 400 in 1988 to (Meister, 1998b, pp. 38–43) almost 4000 – in 2015 (Hirst, 2015). Today, almost all leading American and Canadian corporations (American Express, Apple Computer, Boeing, Dell, IBM, Hewlett Packard, General Motors, McDonald's, Motorola, Disney and others) either already have corporate universities or are planning to have ones. According to Meister (Meister, 1998b, pp. 38–43), corporate universities are the fastest growing sector of professional training worldwide.

The rapid development of corporate universities in the US and Canada was prompted by a number of significant factors, particularly:

- changes in business environment, primarily the increased competition and the transformation of the economy into the “knowledge economy” which resulted in the rapid development of information and communication technologies (Meister, 1998a; Walton, 1999; Dealtry, 2000, pp. 171–175; Paton, Peters & Storey 2005);
- changes in the management of corporations, especially the growing number of companies which, in their work, follow the principles of experimentation, transparency and openness, autonomy and trust, adaptability, variety of viewpoints, flexibility, creativity, cooperation, natural leadership and meritocracy (the principle of management by which the leading positions must be occupied by the most capable employees, regardless of their social or any other status) (Schmitt, 2012; Meister, 1998a) increasing

role of intellectual workers and the sophistication of the knowledge base in companies (Dealtry, 2000, pp. 171–175);

- The need for operational, systemic and effective training of company personnel (Dealtry, 2000, pp. 171–175) and the emergence of innovative learning techniques and technologies (Paton et al., 2005).

J. Meister (1998a) argues that these factors contributed to the formation of corporate university as a “strategic umbrella” for training and development of personnel aimed to enhance the company’s competitiveness through the development of those competencies of employees that are consistent with the business strategy of the corporation (p. 77).

Analysis of scientific works on the problem of research (Meister, 1998a; Prince and Beaver, 2001, pp. 189–199; Paton et al., 2005; Walton, 1999) shows that scientists define three generations (stages of development) of corporate universities:

- first generation of these institutions are training centers that deal with traditional types of training and development of employees. Their main difference from training centers is that they preserve and disseminate corporate values and culture of the organization. Among examples of corporate universities of this generation are those of McDonald’s and Disney companies;
- second generation of corporate universities is characterized by the connection of their curricula with the strategy of the corporation, development of professional competences and formation of corporate values at employees of different levels. An example is the corporate university of Motorola Corporation;
- third generation of corporate universities actively uses innovative technologies to create and transfer knowledge, while expanding the range of intellectual capital management strategies of the company. To this generation belongs Xerox Document University.

Thus, corporate universities in the United States and Canada have undergone a difficult path of formation – from simple units for conducting

workshops to centers of transfer and share of knowledge and innovations, both within and among companies (Rademakers, 2005, pp. 130–136). The modern corporate university is seen as “an educational entity that is a strategic tool designed to help its parent organization in achieving its mission by conducting activities that cultivate individual and organizational learning, knowledge and wisdom” (Allen, 2002, p. 9).

## Functions of corporate university in the US and Canada as structural unit of the company

The activities of corporate universities are always aimed at finding new opportunities, access to global markets and development of relationships with customers (Meister, 1998b, p. 17). Hence, the main functions of corporate universities are the implementation of strategically directed training and staff development; distribution of corporate culture and corporate values; development of the culture of organizational learning and change; introduction of corporate standards; strengthening of the brand of the corporation (Meister, 1998b, p. 19). This allows the corporate university to introduce modern management mechanisms, evaluate and certify staff, receive feedback; promote assimilation of new employees and retain valuable personnel in the company, increase the personal efficiency of each worker and the company as a whole; provide development of business skills of employees and create supporting psychological climate in the company; increase the motivation of employees, etc.

Thus, the corporate university in the US and Canada is a structural subdivision of a company, which performs certain functions that promote business efficiency, particularly: training of personnel of all levels in accordance with the strategic goals of the company’s development; knowledge management: systematic consolidation and dissemination of employees’ experience; development of corporate culture, preservation of corporate values; introduction of innovations; development of leadership, corporate competences of employees.

The fulfillment of these functions by the corporate university determines its specific features which include:

- link to the company strategy and goals which contributes to the increase of human capital of the company, enhances its competitiveness;
- meeting the educational needs of all stakeholders (corporations, suppliers, consumers) (Walton, 1999);
- continuous learning: the aims of training are constantly updated and supplemented (Chanko & Basner, 2015, pp. 79–110);
- diversification, adaptability of learning programs according to purpose, content, contingent, duration, technologies of learning etc.;
- flexibility and proactivity which ensure the adaptation of the company's personnel to the requirements and conditions of the business environment, forecasting its needs;
- support by top managers who take an active part in the work of corporate university in order to ensure its strategic orientation (Paton et al., 2005);
- creation of a single value space in the corporation through the spread of corporate values, employees' awareness of the mission and the goals of the company;
- creation of corporate standards that lead to improved product quality, meeting consumer expectations etc. (Meister, 1998a; Prince and Beaver, 2001, pp. 189–199).

It is important to emphasize on the close relationship between the effectiveness of corporate university functions and the forms, methods, learning technologies used in the learning process.

## Project-based learning at corporate universities: conceptual foundations

The results of the analysis of the activities of corporate universities show their departure from the knowledge paradigm, according to which special importance in the learning process is attributed to knowledge. The modern

business environment requires not only knowledge, but also skills to use knowledge in practice. It raises the importance of the competence paradigm in corporate education which focuses on the concrete result in the learning process, necessitates the search for forms, methods and technologies of learning that involve learners to active cognitive activity, make them active participants of learning, contribute to understanding of where, when and how the knowledge gained can be used in practice. According to J. Raelin (2008), in order for managers to become creative and reflexive practitioners, it is necessary to focus the learning process on the formation of these qualities in a corporate university (Raelin, 2000).

Since learners at corporate universities are adult people, it is especially important to consider the features of adults as learners when choosing learning technologies:

- the leading role in the learning process is played by the learner;
- an adult learner seeks self-fulfillment, independence, self-improvement, self-direction;
- an adult learner has rich life experience (social, professional etc.) that can be used as an important source of learning for himself and his colleagues;
- an adult learns to solve an important life problem and achieve a certain goal;
- an adult looks to the use of skills, knowledge and qualities acquired in the learning process;
- the learning activity is to a certain extent determined by everyday, professional and social factors that restrict or facilitate the learning process;
- the learning process of an adult person is organized as his/her cooperation with the teacher at all stages of the learning: diagnosing, planning, implementation, evaluation, correction (Ogienko, 2016; Lytovchenko, 2016).

Hence, the learning technology at corporate university should be based on the methodological principles of the learner-centered and competence-based educational paradigm and also follow the andragogical principles of learning: the priority of independent learning, use of the learner's experience, individualization, systemic nature, context-dependence, use of the results of learning,



development of educational needs. In this context, the project-based learning (PBL) technology which is widely used in corporate universities in the United States and Canada has wide educational opportunities.

The use of project-based learning at corporate universities has become possible due to predominance of active, interactive learning methods, emphasis on the need to integrate training of managers into the company's overall business strategy.

## Project-based learning as action learning at corporate universities in the United States and Canada

According to A. Mumford (1991, pp. 199–206), project-based learning provides an opportunity to gain managerial experience in real time, solves an important task of personnel development – formation of the ability to learn. Therefore, project-based learning is seen as action learning.

The concept of "action learning" was first used and grounded by R. Revans who considered it the best way to train managers. He drew attention to the discrepancy of theoretical knowledge and their practical application and came to conclusion that knowledge can only be the result of action. He put forward this assumption as basis of action learning technology. Revans also argued that learning (L) functionally depends on two types of knowledge: a) programmed knowledge, obtained in the traditional education (P); b) skills of formulating questions, critical thinking (Q). That is, the learning process was described by him through the formula:  $L = P + Q$ . In his view, the depth and value of Q-knowledge lie in the fact that we learn things independently, that is, create our own knowledge, while most P-knowledge is offered as ready to us. This concept unambiguously refers the technology of action learning to methods of stimulating creative abilities of employees. Particularly important is Revans' idea about the connection between the survival and prosperity of business and the training of personnel. He argued that neither an organiza-

tion nor an individual can succeed if their learning (L) speed is lower than the speed of changes (C) in the external environment, that is  $L < C$  (Revans, 1980).

PBL provides for the integration of andragogical methods and technologies of individual and team work (discussions, round tables, brainstorming, research methods, independent and team work), which allows learners to actively participate in learning activities, analysis and problem solving. This approach requires active involvement of each participant who has a sense of responsibility and feels that he is trusted and supported. This ensures a high level of engagement of all participants in the learning process, the formation of corporate competence, mastering of project management tools – from system engineering to the philosophy of lean manufacturing with teamwork skills based on interpersonal interaction technology, conflict management skills, communication skills etc.

The most important feature of project-based learning is that projects become a central, not a supplementary element of an educational course: they are focused on transformation of knowledge for solving real problems (Thomas, 2000).

With the introduction of projects into the educational process at corporate university, learners research into real problems of the corporation for a long time to gain a better understanding of the techniques and approaches under study. The added advantage of the PBL is that project teams usually require the development and use of soft skills and awareness of difficulties of interdisciplinary activities.

The research shows that project-based learning at corporate universities is of dual nature: on the one hand, it focuses on learners (employee development), on the other hand – on business (business development). One or the other goal can dominate at a certain time. Therefore, it is important to be very careful in selecting projects, making sure that the project topic should be related to current or future changes in the company. The solution to the problem should include diagnosing of the problem, analysis, recommendations, implementation phase, as also cooperation with members of the

company. For example, Shell Project Academy, one of the leading corporate universities in the world, is especially capable in project-based learning and even has an accredited program in project management which is a complex cross-disciplinary science, particularly important for Shell Corporation and other companies like it, as the cross-disciplinary function is crucial for getting access to new oil and gas reserves in the world. The use of the project-based learning at the corporate university provides an opportunity to attract managers to the process of strategic planning and development of their strategic thinking. It has proven effective both in terms of personnel development and business development.

## Conclusion

The results of our research give ground to conclude that the corporate university in the US and Canada is a structural unit of a company, which performs certain functions that promote business efficiency, particularly: training of employees of all levels in accordance with the strategic goals of the company development; knowledge management – systemic consolidation and dissemination of employees' experience; development of corporate culture, preservation of company values; being an innovation center; development of leadership, corporate competence of employees; being a "strategic umbrella" for training and development of the company's staff in order to increase the company's competitiveness by development of the competencies of the staff that are in line with the corporate strategy of the company. They have gone through a difficult path of formation – from simple training units to centers of transfer, exchange of knowledge and innovations both within companies and among them. There is a close relationship between the performance of the functions of the corporate university and the forms, methods, learning technologies that are used in the learning process. The strategy of training in corporate universities is built in accordance with the company's goals. Project-based learning is widely used in corporate universities in the United

States and Canada; it provides an opportunity to gain managerial experience in real time, solves an important task of personnel development – formation of the ability to learn. Project-based learning as action learning is aimed both at personnel development and business development, as also at the effective management of changes in the company.

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