



# 11<sup>th</sup> International Silk Road Conference on Innovations in Business, Education and Sciences

## PROCEEDINGS

აბრეშუმის გზის მე-11  
საერთაშორისო კონფერენცია:  
ინოვაციები ბიზნესში, განათლებასა  
და მეცნიერებებში

### სტატიათა კრებული

**11<sup>th</sup> International Silk Road Conference on Innovations in Business,  
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**აბრეშუმის გზის მე-11 საერთაშორისო კონფერენცია:  
ინოვაციები ბიზნესში,  
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## The Role of Innovative Educational Technologies in Innovation Management

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### Abstract

Over the past four decades the world has witnessed unprecedented progress in the field of technology as well as in that of science, which has led to the emergence of a better-educated and more developed society in international arena. This 'developed' society faces numerous problems concerning stability, security and further development. Frequently, further development is closely connected to sustainable development, with the term 'innovation management' being the core of it. Actually, the basis of stability and welfare in modern society is innovation management based on innovative education. Acknowledging the importance of innovation management, we have made an attempt to reveal its peculiarities as well as the role of innovative educational technologies lying at its core.

The objective of the paper is to outline the peculiarities of innovation management by studying innovative educational technologies at its core. Accordingly, the problems of the research are as follows:

- to reveal and assess the peculiarities of innovation management;
- to reveal and assess innovative technologies in the field of education;
- to indicate the role of innovative educational technologies in management.

A number of empirical and theoretical research methods were used in the paper, in particular, those of observation, comparison, measuring, documentary analysis, scientific experience and induction (inductive method).

The objective of the paper is to present the role of innovative educational technologies in the field of innovation management by showing the importance of innovative technologies in the fields of management and education.

**Keywords:** Innovative Educational Technologies, Innovation Management, Innovation, Innovation Process.

### Introduction

In today's fast developing world, the concept of innovation forms the basis of any project in the process of its implementation. Any sphere with a view to its activity needs new ideas for its further development and improvement. Human factor stands out in any activity, and it should be noted that human innovation development first starts at school, then continues further in the institutions of higher education, and, finally, the skills acquired during studies are employed in the management and organization of the establishment where the specialist carries out his/her activity.

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The study is aimed at revealing the essence of innovation management and showing its peculiarities in the field of education, and the ultimate goal here is to expose interrelation and interconnection between these two concepts.

A number of studies have been conducted with regard to these fields. We have used different methods, namely those of observation, comparison, measuring, documentary analysis, scientific experience, induction, as well as SWOT analysis.

### **Innovation Management: Essence and Peculiarities**

Innovation management is a new scientific discipline in the field of management. Taking into consideration the importance of innovation management in the process of management as well as in economic development and growth, a number of scholars studied the theoretical grounds of innovation management that underlie its practical functions.

Before discussing the essence and peculiarities of innovation management, let us first consider the meaning and essence of “innovation” and “innovation process”, which constitute the basis of innovation management. According to Orlov, “innovation” may refer to any kind of change implemented for the purpose of improving the quality of management (Орлов, 2003).

Nowadays we live in a society where changes occur due to the impact of different factors, such as globalization, international relations, domestic and foreign policy, etc. This leads to the need to adapt to these changes and seek efficiency, which can be fulfilled through innovative ideas.

We need to acknowledge the fact that any innovation has its reason, outcome and consequences. For instance, the emergence of personal computers, which can serve as a bright example of innovation, facilitated and intensified the activities of various organizations and companies thereby contributing to the growth of management efficiency.

In international economic literature, the term “innovation” means turning scientific and technical development into reality, which leads to the emergence of new products and technologies (Stepanova, 2014). Let us present the ideas of a number of scholars regarding the term “innovation”. Cooke and Mayers, for instance, believe that innovation implies a process from the idea itself to its realization in the market (Cooke & Mayers, 1996). Twiss describes it as a process where an invention or idea acquires economic sense (Twiss, 1980). According to Kotler, innovation is a new product, technology, or idea introduced into the market and perceived by the customer as a completely new one which possesses unique properties (Kotler, 2003).

In general, there are more than 100 definitions of “innovation”; they may range from local to large-scale, they may be divided according to their inner structure, i.e. economic, organizational, production, social, etc. (Красникова; Евграфова, 2009).

Innovations may be distinguished by three essential peculiarities (Stepanova, 2014):

- scientific and technical innovation (novelty)
- its practical employment
- commercial realization

Innovation process, which forms the basis of innovation, is also interpreted in various ways (Красникова; Евграфова, 2009):

- it is viewed as a complex of consistent processes aimed at the development and introduction of research and creative projects, which leads to the emergence of new products, services, technologies, organizational abilities;
- it is viewed as a complex of consistent activities, which turns the theoretical part of innovation into a practical one.

As a rule, the following elements are distinguished for the process of innovation (Красникова; Евграфова, 2009):

- the emergence of an innovation idea;
- innovation marketing;
- assessment of the economic efficiency of innovation;
- commercial realization of innovation;
- proper presentation and dissemination of innovation.

Thus, we have introduced two parallel and interconnected concepts, i.e. “innovation” and “innovation process”, which are considered integral parts of innovation management the description of which is important from the viewpoint of acknowledging its peculiarities.

So, innovation management is a set of means to manage innovation process. In other words, innovation management is a type of functional management based on the process of innovation. If we view it from the systemic point of view, innovation management is a system consisting of two subsystems: managing – the subject of innovation, and managed – the object of innovation (Stepanova, 2014). One or more specialized groups may act as a subject of innovation; they involve:

- heads in charge of innovation projects;
- heads of organization departments, subdivisions, units, and services, who implement different stages of innovation process.

The object of innovation involves innovations, ideas, innovation process and economic relations between market participants (manufacturer, seller, purchaser).

Based on the structural elements mentioned above, the main goals of innovation management are as follows (Stepanova, 2014):

- organization growth and development based on innovation activities;
- intensive circulation of new products and technologies in the market;
- use of opportunities aimed at further specialization and diversification of production.

In the process of implementation of innovation management four relatively independent stages are distinguished (Stepanova, 2014):

- Factor approach views science and technology as key factors in the economic development of the country. This stage involves profound research, assessment, and anticipation or projection of scientific and technical potential.
- Functional approach views innovation management as a set of management functions and managerial decision-making process. It highlights the economic modeling of each function of management in the decision-making process.
- System approach implies that innovation process is as organizational structure consisting of a set of interrelated elements, which, in its turn, is aimed at achieving certain goals taking into consideration external and internal factors.
- Situational approach is based on the development of alternative options (depending on the situation) for the implementation of the same goal in the decision-making process.

Thus, the section discussed above clearly illustrates what innovation management is, in view of its essence, functions, and goals. Apparently, the impetus of innovation management is innovation process. It

should be mentioned that innovation management is based on the following forms of innovation process, namely:

- simple intra-organizational;
- simple inter-organizational;
- expanded.

To sum up, we can say that today every sphere needs efficient management; in this context innovation management constitutes a key element the proper use of which may lead to economic efficiency as well as growth and development.

### **Innovation Technologies in Education**

While speaking about innovations in the field of education we should first of all address the subject of Information Science representing the lowest level taught at school. The consecutive chain is presented as follows: penetration of the elements of Information Science into other subjects followed by teaching process, and, finally, their introduction into the whole process of studies. Application of innovation technologies with a view to secondary education leads to the following outcome:

- Informative educational environment, which encompasses various modes and methods in education, significantly increases pupils' motivation in the process of studies, particularly in terms of using the project method;
- Informatization of education reduces tension by shifting the level of subjective relations (teacher-pupil) to the level of objective relations (pupil-computer-teacher);
- With a view to the teacher, informatization allows to increase the professional efficiency of the latter, as well as helps develop his/her general informational culture (Бондаренко, 2012).

Innovation technologies in the sphere of general secondary education are viewed as a means of development and improvement, and there are two directions that are usually distinguished in this regard, namely:

1. the method of modernizing traditional education, when traditional educational standards are improved in view of time changes;
2. innovation approach in education, when the goal of studies is the development of students' creativity skills and input of their research abilities.

Innovation in education takes place by introducing technologies of various types, such as personal computers, laptops, pads, distance-learning technologies, case studies, portfolio, project method, method of electronic testing. The introduction of innovative information and communication technologies requires profound analysis of the application of multimedia complexes in education, the goal of which is to reveal advantages and drawbacks. Although innovation technologies develop and improve the sphere of education, there are numerous threats as well: the role of human factor in the process of education decreases (due to the increase in the number of redundancies), the duration of studies is artificially extended (in view of distance-learning), students' attention is shifted from the process of education, etc. (Долгих, 2010).

According to Bill Gates, while trying to describe innovation technologies in education on the whole, we can view this as "personalization" (Gates, 2013).

Let us consider the steps to be taken while working out innovation technologies in education:

1. find out what we want to do: it assumes developing educational technology as a tool which will give an opportunity to achieve the implementation of particular functions;

2. be open to change: this means taking into consideration current changes, creating an appropriate tool, and, being aware of the properties and peculiarities of the latter provide its efficient application;
3. follow the results, i.e. to follow if the tool provides the desired outcome;
4. not be content with the mere application of the tool, but to seek to achieve the goal for which it was created;
5. make sure that the given tool is applied by a human resource.

So, in this context we discussed the advantages and drawbacks of innovation technologies in education, studied the innovation technologies applied in the field of education, and commented on the steps by which innovation is introduced into the field of education.

### **The Impact of Innovative Educational Technologies on Innovation Management**

After discussing the basic peculiarities of innovation management and analyzing innovation technologies in education, we can consider the interrelation between these two fields.

The formation, development and improvement of any person start at school, where he/she acquires the basic principles of further development. The development of a person's ideology and mentality (as a social being) further continues during higher education studies, and this shapes his "personality". Thus, in the course of his/her professional activity the person employs the ideas and skills acquired during the process of studies. Consequently, when innovation technologies implemented in the field of education provide the future manager with relevant skills, he will definitely introduce innovations into his activity and employ them as a tool to achieve efficiency. A person's drive for innovations is shaped at school provided that the process of learning includes innovation technologies, which, in its turn, will be reflected in the sphere of management. Based on the reasons mentioned above we can conclude that the interrelation between these two fields is undeniable and unavoidable. Yet, we should also note contrasting views in this context: first of all, no matter in which field a manager developed and improved, he may introduce innovations into management, which will actually lead to huge success and advances. Secondly, although a manager improves by employing innovation technologies, he may not achieve the desired outcome in the future.

In this context, we have made observations concerning the impact of innovative educational technologies on innovation management with a view of human factor. The interrelation between these two fields can also be viewed in terms of cooperation between research centers and various companies and organizations, as, for instance, in the case when, for the purpose of improving quality, various industrial companies and enterprises may apply to research centers based in academic establishments.

### **Conclusion**

Based on the objectives of the work as well as the results of the study, we can conclude the following:

1. Revealing the essence and peculiarities of innovation management extends an opportunity to actually assess the importance of its role in terms of development in any field.
2. Any principle of innovation management is based on the complex of elements in innovation process.
3. Any element or goal of innovation management is conditioned by and depends on the peculiarities of the general process of management.
4. Unprecedented technological progress registered in the world led to the introduction of innovation technologies into the field of education. These technologies definitely influence a person's development and further, his improvement as a future manager.
5. The impact of innovative educational technologies on innovation management is inevitable; it encompasses numerous ways and directions, first of all in terms of the development of human factor as well as cooperation between research centers and various organizations.



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