

**PROJECT MANAGEMENT ORGANIZATION
IN EDUCATION ESTABLISHMENT**

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Abstract. The article highlights the urgency of the project management implementation in the educational establishment. The authors emphasize the need to organize an effective process of project management in an educational institution, which requires the availability of appropriate methodological, organizational and cultural support. The education sector in Ukraine is one of the priorities for the use of project management methods and techniques. The authors analyze the prospects of socio-economic development, which requires the development of a mechanism for improving the management system in the field of education, the modernization of the material and technical base of educational institutions, and the creation of prospects for their investment attractiveness. The researchers prove that in the context of educational reforms and orientation of public life on market relations, project management will ensure stability of innovative development of educational institution, and will form a progressive modern philosophy of management activity.

The authors claim that the innovative development of the educational institution is ensured by the planning and implementation of activities on a project basis, transformation into a project-oriented organization. The researchers view project management as a process of managing the project team and resources using specific methods that make the project successful and reach its goal. The author considers project management as the leading technology for managing the innovative development of a school. The article analyzes the use of project management methods to ensure the successful life of an educational organization, which will promote its competitiveness in the context of educational reforms in Ukraine.

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The implementation of the project in an educational institution involves the consistent achievement of the set goals and objectives, taking into account the influence of factors of the external and internal environment, the basic principles and functions of project management. In the article, project management is characterized as a key tool for innovative development of the educational sphere in Ukraine, which will ensure the efficient work of educational institutions in the conditions of market competition. The author proves the urgency of the problem of increasing the efficiency of management, the formation of an effective mechanism for implementing the strategy, the importance of implementing development projects. The dynamic world places new demands on the activity of modern educational institutions. Researchers have identified the methodology of the project management process, i.e., the project cycle, which consists of six stages: programming, identification, formulation, financing, implementation, evaluation and audit.

The article highlights the urgency of ensuring the proper level of quality of education, which is the main strategic direction and task of educational policy, declared by the Ministry of Education and Science of Ukraine. The authors argue that the project implementation in the educational institution involves the consistent achievement of the set goals and objectives, taking into account the influence of external and internal environment factors, basic principles and functions of project management. The article identifies project management as a key tool for innovative development of the educational sphere in Ukraine, which will ensure the efficient operation of educational institutions in the conditions of market competition.

1. Introduction

As a result of complex market transformations that are taking place in Ukraine, new models are created and existing models and mechanisms for building modern social relations in the organization are being implemented. Accordingly, a highly skilled manager of an educational institution understands that in order to continue its effective activity, it is necessary to manage it thoroughly, and project management is an important place. To ensure the quality of the provision of educational services to educational institutions, it is appropriate and necessary to use project management technologies. Such an approach will ensure the harmonization of modern requirements of the state, pedagogical theory and practice, as well as the

needs of consumers of educational services in the quality of education, which will contribute to the formation of competitiveness of the institution and provide the necessary level of provision of educational services. The challenges of today require the education system to create the conditions for the proper development of intellectual capacity, which is crucial for ensuring its quality, accessibility and effective performance.

In today's environment, the education system will only develop in the required direction when it takes into account the demand and supply of educational services products and is guided by the current demands of consumers of educational services and their state of satisfaction. This approach to the organization of life of the educational institution is provided by project management, which in the present conditions is a certain technology that promotes innovative development.

At the end of the last century, there was an awareness of the need to apply project management methodology to successfully implement a company strategy. Many scholars, experts and consultants are working to develop aspects of strategic change implementation in organizations. The development of the concept of project management took place in the direction of improving the methodological foundations of project-oriented management, development management and improving the management of the strategic process and changes in the organization. In this direction, the first attempts at scientific generalization of the essence of the concept of «project management» were made by P. Leuven, L.P. Batenko, O.A. Zagorodnykh, V.V. Lischinskaya, B. Trillenbergh, K.F. Gray, E. Larson, among others.

With Ukraine's transition to a market economy, globalization of world markets, and increased competition, organizational structures have been challenged to find new ways to ensure long-term existence and success. The key to achieving effective results in the fight against competitors is the implementation of innovative projects. In today's environment, the use of project management is the time issue.

2. The essence of the “project management” concept in management activities

Project management as a science has been popular in Europe and America. Initially, project management skills were applied in the business field. Although the rules of project management are the same for different

countries of the world, it is worth noting that the cultural contexts, in which projects are implemented, are different. “Projects are a vital contribution to the future, they are a key component of change...” [1]. The education system in Ukraine needs reforming and attracting a large number of financial flows to stimulate its development [2]. Project management allows you to fulfill the basic requirements for the implementation of any project and submit it in a timely manner. Today, such principles of work are needed in the educational field, because the process of applying for a grant from such grants as the European Commission is complex and painstaking [3]. For more than 35 years, since the beginning of active interaction and collaboration between scientific institutions in Europe, a number of projects have been established, with the financial fund of some of them reaching tens of billions of dollars: Horizon 2020, TEMPUS, ALFA, ALBAN, ATLANTIS, Erasmus + [4].

One of the most respected educational institutions specializing in providing educational services in this area is the Project Management Institute (the USA). Project management by definition of this institution is an effort over a period of time aimed at creating a unique product, service or result. Scholars at the Institute point out that projects can be implemented in various fields, in the public and private sectors. Regardless of the industry in which the project is implemented, it must be completed on time, within the specified budget, and ensure that the organizational, training and any other tasks set by the implementing organization are fulfilled [5].

“Project management is the rational use of knowledge, techniques, skills in a specific project to ensure its effective implementation” [5]. Until the middle of the 20th century, project management was practiced “informally”, and only later it developed into a separate science, and the people involved in it acquired a separate profession.

The Institute of Project Management has developed a separate book of project skills (A guide to the project management body of knowledge), which is the alphabet for every person involved in project activities. Any project, whether in education or business, should have several key phases: initiation, planning, actual implementation, control and monitoring, completion of the project [5].

Knowledge in the field of project management is complex; they cover understanding of professional concepts and skills in various fields of

knowledge. According to the specialists of the Project Management Institute, they include: integration, funds, human resources, stakeholder management, scale, quality, communication, time, procurement and risk management [5].

The scientific approach, which first touched upon the subject of project management, was proposed by the representatives of the French theory of agreements (theory of conventions) [6, p. 9]. The term “projectus” literally means “thrown forward”; the management object, which can be represented as a project, highlights the possibility of prospective deployment, that is, the opportunity to predict its future status [7, p. 16]. A project is a format of activity of a modern person, but activity can be regarded as a project only when [6, p. 11]:

- it is objectively complex in nature and is the analysis of the internal structure of the whole complex of works important for determining its effectiveness;

- the transition from one type of work to another determines its main content;

- the achievement of the goals of the activity is connected with the parallel-consistent-parallel fulfillment of the components of these goals;

- limitations on time, financial, material and labor resources are of particular importance in the process of performing planned works;

- the duration and cost of the activity depends on the organization of the whole complex of works.

Modern Ukrainian researchers in project management define the project as a set of purposeful, time-oriented, one-off, complex and irregularly repeated actions (measures or works), focused on achieving the end result in the conditions of limited resources and set deadlines [8, p. 21; 9, p. 45]. The different approaches to defining the concept of «project» by authors are analyzed in Table 1.

Therefore, on the basis of the analysis of the essence of the concept of “project”, in our opinion, this economic category is defined as a set of concerted management actions aimed at achieving certain goals or expected results, which are implemented by a specific strategy within a clearly defined period, within the limit required resources (financial, personnel, material, etc.).

In the scientific literature, the main characteristics of the project implemented in the educational field are identified [12, p. 12]:

- the presence of a problem to be addressed by the project;

Table 1

The essence of the concept of “project” in management activities

Authors	The essence of the concept of «project»
British Standard BS 6079-1: 2000	A project is a unique set of coordinated actions (works) with a definite beginning and an end, carried out by a person or organization to achieve a goal in a predefined timeframe, covering costs and performance parameters
Australian Project Management Institute	A project is a unique set of interrelated actions (works) with defined start and end dates required to succeed achieving the common goal
American Project Management Institute	A project is a temporary organization created to market a unique product or service
A. Tovb, G. Tsines	The project is a specific form of purposeful change that requires these changes to be implemented within certain constraints on the timing, cost and characteristics of the expected results
P. Martin, K. Tate	The project is a temporary process that has a beginning and an end and a result which is unique
I. Mazur, V. Shapiro, N. Olderogge	The project is a purposeful, pre-designed and planned creation or modernization of physical objects, technological processes, technical and organizational documentation for them, material, financial, labor and other resources, as well as management solutions and their implementation measures
Project Management Knowledge Code	A project is a specific task with defined inputs and required outputs (goals) that determine how it is addressed

- presence of participants, including the main target group and final beneficiaries (consumers);
- systematic and purposeful;
- interdependence of the purpose, goals, objectives, actions, resources and expected results of the project;
- limited resources;
- formulation of the project implementation plan based on the relationship between the quality, cost and duration of the project;
- identification of the potential risks and finding ways to overcome them;
- isolation and interaction of project product creation and management processes;
- the presence of feedback between the products, results, goals, actions and resources of the project;

The essence of the concept of “project management”

Author	Definition
L.P. Batenko, O.A. Zagorod-Nih, V.V. Lischinskaya	It is the process of managing a project team and resources by specific methods, through which the project completes and successfully achieves its goal.
W. Trillenberг	It is a set of management tasks, organizational actions, methods and tools aimed at achieving the project goal.
L.S. Kobilyatsky	This activity is aimed at the implementation of the project with the highest possible efficiency with the given restrictions on time, costs (resources) and quality of final results.
Project Management Institute Specialists (the USA)	It is the art of managing and coordinating human and material resources throughout the project life cycle, applying systems of modern methods and techniques of risk management and minimization to achieve project results in terms of composition and workload, cost, time, quality and satisfaction of participants
G.M. Tarasyuk	It is a recognized worldwide methodology for solving organizational and technical problems, it is the philosophy of project management, the process of managing a team, project resources through special methods and techniques in order to successfully achieve the goal.
A. Tovb, G. Tsines	It is a professional creative activity in the management of human and material resources through the use of modern methods, tools and the art of management to successfully achieve the previously defined goals with certain requirements for terms, budget and characteristics of expected results of the projects being implemented. in market conditions in social systems.
P. Martin, K. Tate	This is a set of tools, technologies and knowledge that can be used to achieve the best results in a project.
I. Mazur, V. Shapiro, N. Olderogge	This is a methodology for organizing, planning, managing, coordinating labor, financial and logistical resources throughout the project cycle, aimed at effectively achieving its goal by applying modern methods, techniques and management technologies to achieve project-specific results in terms of composition and scope of work, cost, time, quality and satisfaction of project participants.
Project Management Knowledge Code	This is the process of applying knowledge, skills, methods, tools and technologies to project activities in order to achieve or exceed the expectations of project participants
L.V. Nozdrina, V.I. Yashchuk, O.I. Polotai	It is the application of knowledge, skills, tools and methods to project operations to meet the requirements defined for the project.

– a monitoring and evaluation system has been developed to support project management;

– financial and economic justification for the benefits of the project, which should exceed the costs of its implementation.

Table 2 shows the theoretical approaches of scholars in the field of management to determine the essence of the term “project management”.

Thus, project management is a management process that involves the use of innovative tools, the application of knowledge, methods and technologies of project activity in the conditions of the available resources of the organization, with the aim of achieving the defined project goals, will contribute to the innovative development of the institution.

Table 3 shows a systematic classification of types of project management based on the defined stages of implementation of management functions.

Table 3

Features of realization of process approach of project management

Classification features	Stages of the process of implementation of functions
According to the World Bank	<ol style="list-style-type: none"> 1. definition of project concept; 2. data preparation; 3. data evaluation and decision selection; 4. negotiations and choice of the contractor organization; 5. implementation, including design development; 6. use; 7. post-project review.
In terms of information support	<ol style="list-style-type: none"> 1. awareness of the need; 2. formulation of requirements; 3. system design; 4. implementation; 5. testing; 6. service.
In terms of project life cycle	<ol style="list-style-type: none"> 1. project formulation; 2. planning; 3. implementation; 4. completion.
By structural division into phases	<ol style="list-style-type: none"> 1. pre-investment; 2. investment; 3. operational; 4. phase of project closure.

According to the process approach, planning processes are one of the most important for the success of the project to ensure the effectiveness of project management in the school. They are about defining the goals and criteria for the success of the project and developing ways to achieve them. During the planning, the project objectives are justified and the resources are identified, the complexes of work are defined, the effective methods and means necessary for their implementation, the interaction between the project participants is established.

3. Project management methodology

Project management methodology involves the development, implementation and development of a project as a complex system that is reproduced and operates in a dynamic external environment [15, p. 35]. The main elements of the project are the concept, idea (problem, task), the means of their implementation (problem solving) and the results obtained during the project implementation. The overall project management technology remains relatively stable and covers [16, p. 76]:

- formulation of project objectives;
- project justification;
- development of project structure;
- determination of volumes and source of financing;
- compilation of costing (estimates of works);
- determination of terms of project work execution;
- drawing up a project implementation schedule;
- calculation and allocation of resources;
- selection of project team;
- quality management;
- risk management;
- organization of project implementation;
- preparation and conclusion of contracts;
- maintaining contacts with customers and consumers of project products;
- control over project implementation, etc.

The project approach is applied when clearly defined: the project objectives and the end result; allocated or available resources; timelines and restrictions. However, the implementation of the projects implies the

availability of appropriate methodological, applied and organizational and cultural support for management processes. It is important to ensure the effectiveness of project management in an educational institution that the basic principles of management activity are respected (Table 4). Project management is the process of managing a project team and resources using specific methods that make the project successful and reach its goal.

The application of project management tools and methods is relevant and depends on such major factors as:

- scope of the project, scope of work, their cost;
- complexity of the project;

Table 4

Basic principles of project management

Basic Principles	Contents
Purpose	It is expressed in the project's goal orientation towards achieving the ultimate goals of the activity
Systematic	Provides consideration of the project innovations from systemic positions. Thus, there is an opportunity to open and design a rational connection of subsystems, their correlation and subordination, to give quantitative and qualitative estimates of the progress of implementation of the project and its individual parts
Complexity	Provides consideration of phenomena in their relation and dependence. A comprehensive approach in project management involves: sharing different forms and methods of management in the development and implementation of innovations; consideration of all common management goals by levels and units of the organizational and production structure of the enterprise; the connection of individual elements of the project with each other and with the main (final) purpose of the project; consideration of individual project issues in terms of time intervals
Security	Consists of all the measures envisaged by the project must be completed with different types of resources needed to implement it
Priority	When designing and implementing a project, priority is given to the overall concept of strategic development
Economic security of the measures	It is calculated on the basis of an estimation of probability of occurrence of losses or any losses as a result of unfulfilled planned events

- the number and interconnections of internal and external project participants;
- the likelihood of changes both in the project itself and in its structure, conditions, environment and the need for rapid response to them;
- the presence of competitors;
- conviction of senior managers in the need for a dedicated organizational structure and persons who will be responsible for the final results of the project.

The essence of project management is to manage the goals of the organization, which will allow the company to be successful in competition, quickly respond to external and internal changes. Project management is a key tool for innovative development of the educational sector in Ukraine, which will ensure the efficient operation of educational institutions in the conditions of market competition.

3. The functions of project management and its role in the innovative development of the educational institution

During the period of reforms in the educational sector, the development of national educational institutions using modern effective management tools, one of which is the project methodology, will be promoted. Knowledge of project management methodology enables organizations to successfully, timely and qualitatively implement their projects by investing in a set budget. However, successful implementation of projects is only possible if there is an effective team of highly qualified management specialists.

both from a theoretical and a practical point of view, problems related to aspects of the functioning of the educational services market are important today, namely: problems of imbalance of the market of educational establishments and the labor market, imbalance of supply and demand, ensuring the proper quality of education and problems of adapting graduates to market requirements, etc. An important obstacle to becoming and developing a project management profession in Ukraine as a profession is a low level of understanding of the importance of project management methodology as a tool for the development of modern organizations.

Prospects for socio-economic development require the development of a mechanism for improving the strategic management system in the field of education, modernization of the material and technical base

of educational institutions, creating conditions for their investment attractiveness. Innovative development of educational organization has a linear dependence on the development of innovative potential of each participant in the educational process, which is ensured by their ability to organize their activities as a project [18].

The current conditions of functioning and development of educational institutions are market. It is the development of a market economy, the orientation of Ukraine to democratic transformations that determine the changing priorities of social life in modern society, require the scientific search for new, effective management mechanisms, in particular, an education system that would contribute to the corresponding changes in human relations, develop the success of life activities (Figure 1).

The challenges of today that in some way prompt the transformations that take place both in the education system in general and in every educational institution in particular. Such transformations provide the creation of conditions for the proper development of intellectual potential, which is a decisive factor for ensuring the quality, accessibility and efficiency of activities, which, in turn, is the essence of innovative development of each educational institution of the educational system [19]. The innovative development of the educational organization is based on a specific target activity of the subjects of the educational process, which differs from the established practice and aims at creating and implementing a set of innovations to ensure the quality of educational services and competitiveness of the educational institution.

There are certain features of project technology in education [19, p. 18]:

- focus on the development of cognitive skills;
- the focus on the development of the ability to independently create an individual plan for professional self-development (to construct their knowledge);
- orientation in the information space;
- the ability to generalize and integrate the acquired knowledge from different sources in the process of theoretical and practical training in practice.

One of the fundamentally new innovative technologies for organizing such a targeted activity of the subjects of the educational process is project management, which ensures the success of the life of both the educational

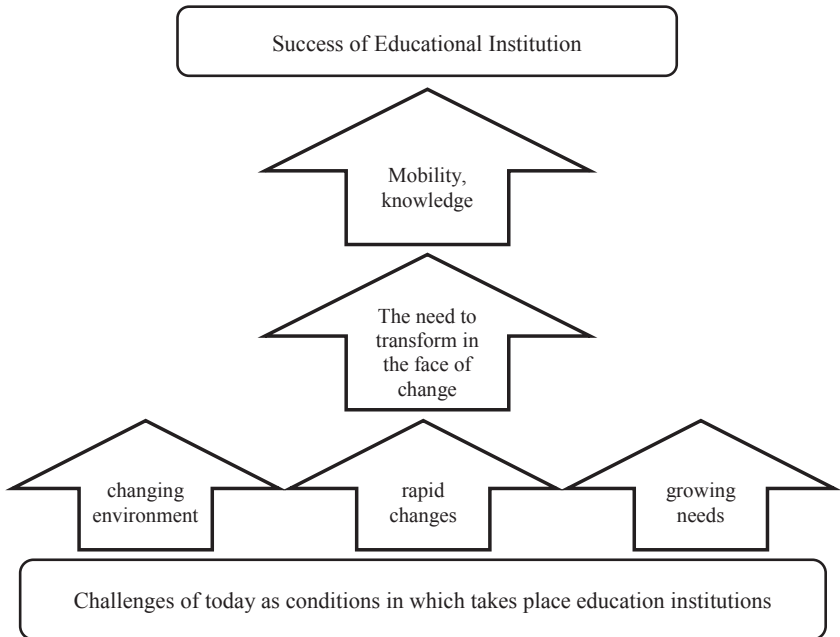


Figure. 1. Factors of the external environment that ensure the effectiveness of the school

organization in general and the modern person in particular. In today's conditions, the leading skills are the ability to organize the life of the organization as a project:

- to define strategic goals and the nearest prospect of development;
- to find and attract the necessary resources;
- to outline the action plan, to ensure its implementation and to evaluate the results of management activities.

Project management allows to find a balance between academic knowledge and practical skills, satisfy the desire of the individual for free choice of activities with an emphasis on interest and personal significance of the problems being solved (Figure 2).

Project management, as defined by DIN 69901, is a set of tasks, organization, methods and management tools for project implementation;

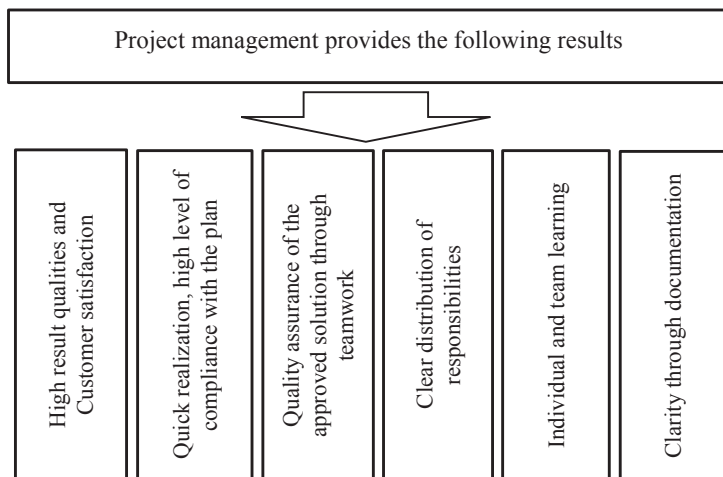


Figure 2. Effectiveness of project management

project characterization can be defined as a set of management tasks and organizational actions, methods and means aimed at achieving a certain goal of project activity (Figure 3). It is possible to influence the ways of achieving the project results, goals, quality, timing and cost of the work through technologies, composition, characteristics and resource allocation for certain tasks. Thus, project technologies and resources are the main levers of project management.

The project is characterized by the uniqueness of the conditions in which the project activity is carried out, such as: uniqueness of the defined purpose; temporary, financial, human and other limitations; delimitation from other intentions; project-specific organization of its implementation, determination of the sequence of stages. Nowadays, the innovative development of an educational organization is a defined project, which is a process that has a time constraint (defined beginning and end) and is carried out to achieve certain goals.

The manager of the educational organization provides positive dynamics of innovative development by carrying out the general management of the institution by the methods of project management. The main indicators of the effectiveness of the use of methods and techniques of project management, namely:

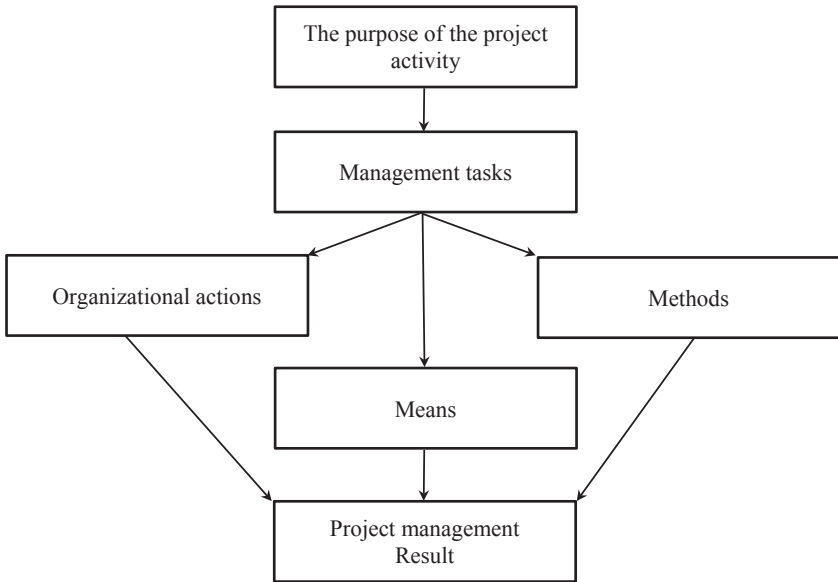


Figure 3. Main characteristics of project activity in educational institutions

- knowledge of the principles and methods of project management (planning, organization, scheduling, monitoring the implementation of project stages, managing progress to achieve the goal, tracking results);
- experience in the field of management – the application of managerial skills of organizing people’s activities to achieve the goals of the organization, taking into account specific conditions.

Thus, in the context of educational reforms and the orientation of public life on market relations, project management will ensure the stability of innovative development of educational institutions, forming a progressive modern philosophy of management.

At the same time, it must be emphasized that there is a distinction between project management used in business and project management used in education. Firstly, it has to do with the ultimate purpose of the activity. In business, the purpose of creating and implementing the project comes from its external customer, and in the field of education such customer is the

head of the educational organization and the pedagogical staff. Secondly, it is the motivational aspect. The implementation of the project in business is subordinated to external aspects of motivation, and in education – internal, which is reflected in table 5.

Table 5

**The main differences between project management
in business and educational institution**

Business	Education Institution
<ul style="list-style-type: none"> – more often the top-down managerial hierarchical model; – the key objectives and objectives of the project are formed by the customer; – systematic control over the project implementation processes (indicators, return index, etc.); – clearly defined terms of project submission and strict standards for its implementation; 	<ul style="list-style-type: none"> – tool for ensuring the success of life and development of an educational institution; – increases the motivation of the subjects of the educational process to carry out their professional activity; – ensures sustainable innovative development of the institution; – determines the competitiveness of the institution in the educational services market and in the labor market

In addition, there are certain advantages to using project management technologies for the innovative development of an educational institution. First of all, this technology provides a positive development of the level of professional competence of both teachers in general and the manager of the educational institution in particular. Therefore, the above gives grounds to claim that the success of the educational organization, its competitiveness can be ensured using project management methods. This approach will contribute to the innovative development of the educational institution in a constantly changing environment.

Managing such innovative development involves timely targeted impact of the governing system on the managed system in order to ensure the positive dynamics of this development and, accordingly, promotes the competitiveness of the institution both in the labor market and in the educational services market. Management in the education system is an integral part of the management of social systems, and, from a scientific point of view, it can be defined as a purposeful interaction of the managed and management subsystems to regulate the activities of educational organizations in order to transfer it to a higher level of development.

As the functioning and development of the educational institution as a social and pedagogical system occurs in the context of constant changes in both the internal and external environment, the management of such a system should respond to these changes and ensure its restructuring in a timely manner. The effectiveness of management decisions depends entirely on the effectiveness of the mechanism of tracking, accounting and management of current changes, independent determination of customer satisfaction and the formation of requests, such efficiency can be ensured through the use of innovative technologies in management activities.

The success of the educational organization's activity as project-oriented can only be ensured by the use of project management technology. The uniqueness of the management activity with the use of project management technology is that the said activity is organized as a project. Its difference from the traditional, process-oriented one, when one can once study the execution of operations and then repeat them every time, is that in an activity organized as a project management actions will be different every time. This activity is called innovative because the use of project management technology requires constant updating of the content of the work, the use of additional knowledge, skills and means to meet or exceed the needs and desires of project stakeholders.

Effective management is the most important component to the success of a project, because projects are successfully implemented when management professionals make a professional effort to work on projects. In terms of process approach, it is advisable to distinguish two groups of project-related processes:

- project management processes;
- project life cycle processes.

Project management processes implement various management functions:

- Initiating Processes – making a decision to start the project;
- Planning Processes – definition of goals and criteria of success of the project and development of working schemes of their achievement;
- Execution Processes – coordination of people and other resources to execute the plan;
- Analysis and Processes, Controlling Processes – determination of compliance of the plan and implementation of the project with the set

goals and criteria of success and deciding on the necessity of applying corrective influences, determination of necessary corrective influences, their coordination, approval and application;

– Closing Processes – formalizing the execution of the project and bringing it to an orderly finale.

In the structure of design in the educational institution distinguish a sequence of stages, namely:

– awareness and formulation of the practical problem situation, justification of the possibility and feasibility of the project (initiation);

– gathering information, studying the experience of transforming reality and similar projects, creating a concept, forming a design task, defining project requirements,

– making a decision on designing; forming a team of designers;

– planning;

– design;

– implementation of the project;

– analysis of the success of project implementation;

– making and managing changes;

– completion of the project.

6. Conclusions

It is determined that the main directions of improvement of project management in an educational institution are: development of project consulting, expert community, management, project analytics, professional specializations of designers, regulatory legal support of project activity; flexible financing of projects; public involvement, etc. The project includes a substantive component and an organizational component. The organizational component depends on the effectiveness of project management in the educational institution.

The most important components of the project are a clear focus on the effectiveness of the measures, the need to achieve them within a certain period of time in the conditions of limited resources. Project management at the educational institution helps to plan the educational organization's development activities so that they are implemented; to structure the project structure in such a way that it is clear and understandable; effectively and motivated to organize management activities. Perspectives

of socio-economic development of the state require the development of a mechanism for improving the management system in the field of education, modernization of the material and technical base of educational institutions, creating conditions for their investment attractiveness. In times of crisis, the use of modern effective management tools, one of which is the project methodology, can facilitate the development of domestic educational institutions.

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