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Formation Model of Future Progect Managers Information Culture

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ABSTRACT: *The article reveals the characteristics of the process of progect managers information culture formation. The concept of "information culture of the Project Manager" is formulated, which is a basic invariant component of the managerial activity of the Project manager and a complex individual-professional formation, which in turn provides an effective implementation of information activities in the design and implementation of the project.*
It is established that theformation model of future project managersinformation culture should reflect general knowledge on the theory of management, operational management, organizational behavior and specific knowledge, which solves the manager in the process of information activities in the implementation of the project.

KEYWORDS: *information culture, informational culture of Project manager, project management, theformation model of future project managersinformation culture.*

I.   PROBLEM STATEMENT.

The development of information and communication technologies (ICT) has become the determining factor in the development of modern society.In the maelstrom of modern life, information is rapidly distributedat the request of interested people, organizations and is provided to them in the usual form.The cost of using informational services is so low that they are accessible to everyone. In the information society, people have the opportunity to access information sources.The process of computerization release them of routine work, allowsyouto provide a high level of automation of information processing in all areas of their lives [2].

A significant change in management objectives and a significant complication of its content and character today put forward fundamentally new social requirements for the professionalism and personal qualities of managers, increase the value of their general and managerial culture, understanding the underlying essence, which also: continuously evolving. One of its most dynamic elements is the information culture. Thus, the latest strategic documents of the European Union (Lisbon Declaration, Copenhagen Declaration) provide that the organization of information culture should ensure the use of ICT in the teaching of disciplines for a higher education institution (further HEI) through all educational programs.

It should be noted that today the problem of the organization of information culture acquires great importance in the preparation of future project managers in HEI. From the above outlined, there is a need to develop a model for the formation of the information culture for future Project Managers.

Analysis of recent research and publications. The problem of computerization of education, software development and methods of using software products in education are disclosed in the works of many scientists, namely: A. Bakhtin, A. Baranovsky, B. Gershunsky, M. Golovan, M. Zhaldaka, I. Marhel, There are. Mashbits, N. Morse, and others. The use of software products in trainings is presented in the works of D. Byrd, D. Davis, V. Gorsky, R. Gurevich, M. Kademii, V. Razumovsky, I. Petritsin, K. Thomas and others. Such outstanding

scientists as G. Vorobyov, Y. Doroshenko, A. Ershov, L. Kalinina, V. Militaryov, N. Rosenberg, and others studied the formation of an information culture of a person.

The purpose of the article is to develop and justify a model for the formation of an information culture of future Project Managers.

II.   PRESENTATION OF THE MAIN RESEARCH MATERIAL.

In the conditions of the emergence and development of a market economy and the further democratization of public life, the processes of making important and responsible management decisions require the accounting and processing of large amount of information. A project manager cannot make an effective decision without a system analysis of a problem situation and without comprehensive consideration of a multitude of indicators of the state and the nature of the functioning of the organization and its external environment.

Undoubtedly, the project manager of a large enterprise, institution or other complex social system is always provided with appropriate information-analytical and forecast services that prepare for it the necessary information support, provide appropriate expert and intellectual support to the decision-making process. However, managerialculture in the conditions of rapid growth of information flows consists in skillful differentiation and division between direct executors. Project manager needs already pre-processed synthetic data so that he can use exactly what he needs for effective project management, without any unnecessary information (noise) that interferes with the proper performance of his professional functions. Under these conditions an important element of the manager's information culture is computer skills, which are especially important in connection with the spread of telecommunication systems and the possibility of widespread access to world information resources through the Internet.

Important changes in the work of managers await us in the near future. Described by one of the most prominent managers of the late XX - early XXI century, the founder of the world-famous Microsoft Corporation B. Gates. The concept of the information highway, distance education, e-commerce, enterprise management over long distances, a new understanding of the essence and nature of the business with the extensive use of information, etc. reveal only some of the prospects for the formation and development of post-industrial society.

Skillful use of the benefits of the information structure contributes to the emergence of new concepts, one of which was the concept of information culture. It seems to be understandable at the intuitive level, but has not yet received the generally accepted interpretation of its content. So, A. Khmelnitsky defines the information culture of a specialist as "a set of general educational and highly specialized knowledge, skills of working with information necessary for him to perform his professional duties in a quality manner". The structure of the concept of information culture, in his opinion, "besides general knowledge, skills and abilities of information processing, includes knowledge, abilities and skills of working with information of a certain thematic focus. After all, as practice shows, a specialist who processes scientific and technical information is unlikely to be able to process information of a socio-political content with the same quality, and vice versa "[4, p. 392].

In our opinion, the author somewhatsimplified considers the composition and structure of the combination of managerial functions associated with the use of information technologies in his professional activities, a certain level of possession of which is a sign of the information culture.

Considering the above, the information culture of Project Managers represents such a minimum amount and level of knowledge and skills that is necessary for it to work effectively with information flows and arrays, for the effective use of technical means and technologies for collecting, storing, processing, receiving / transmitting, presenting and analyzing information with the goal of effectively managing projects.

The role of information technology is increasing in project management today. Due to IT project management (hereinafter - ITPM), the effectiveness of their management is being increased, and projects that are not completed are becoming fewer and fewer, because this management system with the help of IT allows the project manager to control all the factors that have a significant impact on the project [1]. Because of information technology, communication between the participants becomes steady, monitoring the deviation from the implementation plan project becomes easier, all stages of the project are documented without waste of time, control becomes more operational. We have structured the benefits of using IT in creating a project (Figure 1).
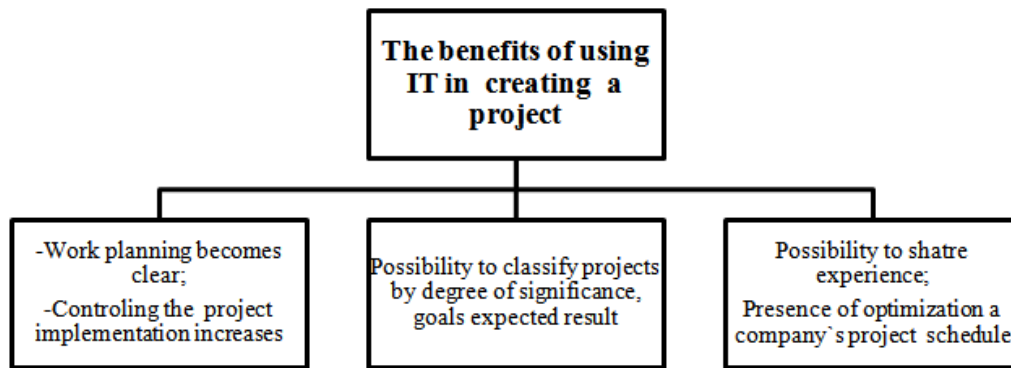
Figure 1. The benefits of using IT in creating a project

By analyzing the figure. 1 it can be claimed that because of IT there is an opportunity to classify projects, giving priority to projects that are strategically important from the resources and funding of the organization. Optimizing a project schedule gives opportunity to distribute resources of an organization or company, taking into account factors such as availability of resources, priority of projects, limited funding . By keeping the experience gained during the project, it is possible to prevent mistakes in following projects, as well as reduce the time for their planning [5].

In addition to the foregoing, the preparation of future project managers (project and program managers) in the HEI should provided using general and specific knowledge, which should become a fundamental part in preparing the information culture formation model of future Project managers (Fig. 2).
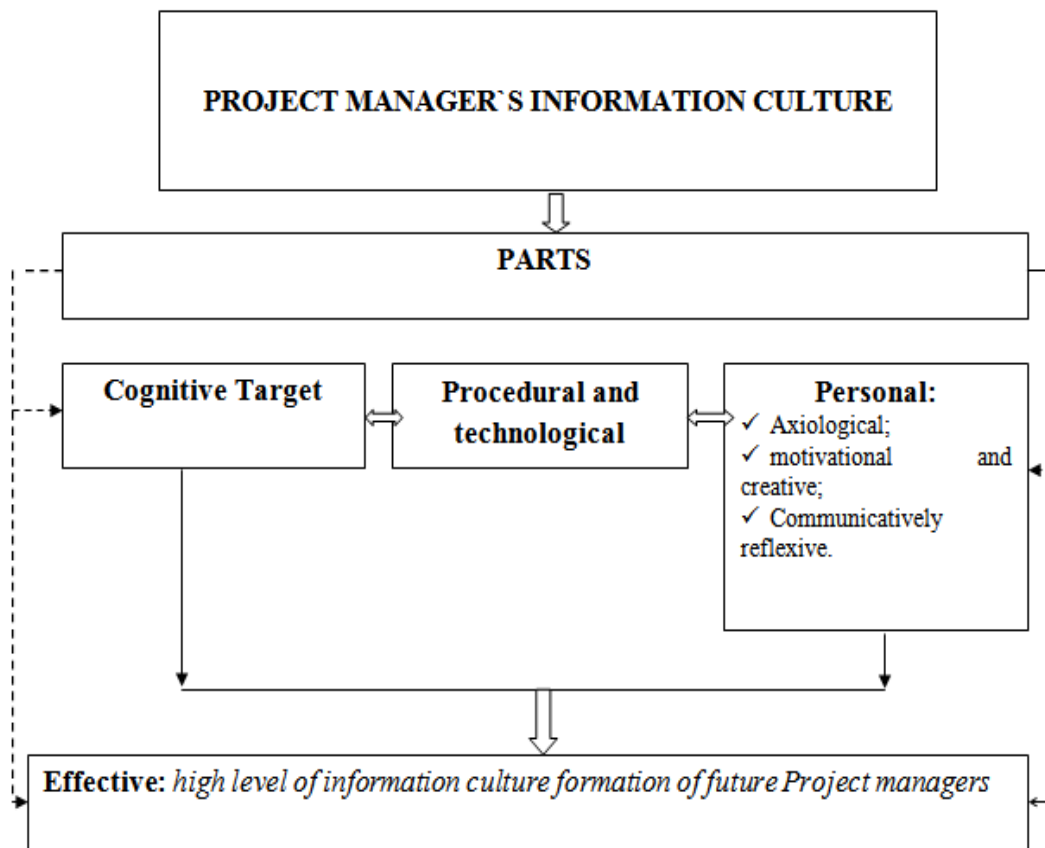

Figure. 2. The information culture formation model of future Project managers

The systematic bases for the information culture formation model of future Project managers are the goals, knowledge (knowledge and skills), functional (managerial functions that are necessary for the

professional activity of the manager) and competent scientific approaches that enable the substantiation of the cognitive-target component of the system.

During the research, we have focused on the fact that information competence is a basic component of information activity and the substrate of information culture of Project managers, integral integrative formation. As noted above, an important place in our study is the problem of determining the amount of general and specific knowledge and skills, a set of attitudes and values that characterize the information competence of Project managers, and their structuring into a single integrated model.

So, the information culture formation model of future Project managers

is a peculiar standard, a descriptive analog that reflects the main characteristics of Project managers management .

The preparation of future Project Managers in the HEI should provide using general and specific knowledge.

The general knowledge means of knowing the theory of management, operational management, organizational behavior, etc. The specific knowledge reflects the features of the activity sphere, which includes projects - educational, innovative, organizational, etc. [5].

In the course of the research, we found that the Project Manager in any system of material and non-material production must have the appropriate knowledge and skills of management, namely: to be able to work in a team, to have analytical skills and ability to monitor, to know the methods of budgeting and business planning , methods of investing in projects, building optimization project models, skills in the field of time management and being an experienced user of software [5].

Thus, The information culture formation model of future Project managers should reflect general knowledge on the theory of management, operational management, organizational behavior and specific knowledge that the manager solves in the process of information activity in the implementation of the project.

When creating the model, we aimed to achieve a sufficient completeness of the cognitive and other simulated components with the minimum number of elements that it forms and evaluates. During the theoretical substantiation of the model we took into account such ideas, theoretical positions [3, 5] and conclusions:

1. Professional formation of a higher education student in the specialty of project management requires intense creative work on the development of his own personality, the formation of skills to work in a team and the information literacy development, which is a part of the Project manager information culture.

2. Among a large number of professionally relevant disciplines in the process of training future project managers in universities, the priority for project management should be given to information technology studying, as information management systems increase the effectiveness, reasonableness and speed of management decisions and let automate all major operations of the project activity.

3. Each project manager should have a high level of using software for the creation and implementation projects. Thus, the using the project management theory is the using of a developed information business environment, which includes a large number of software tools for design and project management.

Represented in Fig. 1, the cognitive-target component represents to the project managers the awareness of the information activities goals and objectives; knowledge system of information management in the project area, social and legal informatics and related disciplines, which is the methodological and theoretical basis of information activity. The cognitive-target component is presented as a set of general and specific knowledge, skills and abilities.

The system of scientific knowledge in the cognitive-target component is represented by the basics of information management, social and legal informatics, information science, the essence of information interaction of management entities using ICT tools, information processes, information flows in the architecture of the project management system; psychological and pedagogical, organizational-methodical, technical, ergonomic, sanitary-hygienic conditions of information interaction in the system of project management; methods and means of ICT (hardware, software), modern channels and means of communication, communication means and technologies for the implementation of the communication process, features of computer communication and functional capabilities of computer technology; the basics of work with the information and means of ICT, the possibilities of ICT and the Internet (the essence of the terms "information", "types of information", "information processes", "information activity", "information resources", etc.) in management activities, application software management purpose; the possibilities of the Internet and ICT tools for the search, classification, transformation, preservation of information, methodology of quantitative and qualitative assessment of information resources, methods of forecasting their needs; rules of the use of intellectual property objects on the Internet; rational ways of accessing information resources of the Internet.

The process-technological component characterizes the ability of the Project manager to apply modern means of information and communication and computer technology while working on the project; skills and abilities to work with modern computer tools and software; understanding of the computer as an automated workplace (AWP) of the manager and mastering the methods and actions that determine the operational basis of

information activities. Process-technological component includes multifunctional skills to receive information from different sources, present it in an accessible form and navigate in the world of information space; use a personal computer, work with hardware and software at the level of a qualified user; use ICT tools to solve a wide range of professional tasks in the project area; to search information on the Internet, to use different methods of working with Internet resources as sources of information; rational use of distributed information resources on the Internet; to independently acquire information, new knowledge on the basis of the use of ICT, the Internet; carry out the exchange of information, its search, selection, analysis, synthesis, processing and other information processes, in particular with the use of web technologies; to develop presentations of the project and self-presentation, web-sites, which allow to realize this or that project.

In the professional activity of the Project Manager, the skills of the procedural-technological component are aimed at: using the computer and communication facilities in the dialog mode (online, chat, forum); separation of primary information from secondary; the search for the necessary information, data, that is, the separation of relevant information, which is important for decision-making or task-solving, from unnecessary information and its presentation in a convenient form for perception; development and implementation of projects; work with modern computer tools and software project management systems; Effective preliminary analysis and filtering of information in such a way that members of the project team receive only the information that they need when implementing the project.

The personal component of the formation of the informational culture of future Project managers is represented by a set of axiological, motivational, creative and communicative-reflexive components.

The axiological component of the personal component of the formation of the information culture of the Project manager represents the manager's ability to understand the value of information resources and to have a self-motivated attitude to information activities, readiness for manifestation of acquired knowledge during training in the ZOO of information competence. Includes the creation and use of information products in professional activities; value attitude to managerial and informational activity and personal professional growth; the formation of personally significant and value aspirations, beliefs, attitudes, attitudes to the project management process and the finished "product" of information activities (the latter we understand the successful implementation of the project).

The motivational and creative component of the personal component of the formation of the information culture of the Project manager represents the awareness of the need to acquire a certain amount of general and specific knowledge and skills that are needed in project management; the desire to acquire new knowledge, to master new software tools for project management. The experience of creative activity is represented in the form of the ability to implement information management of the project and to take non-standard management decisions based on information in uncertain conditions, to develop a system of information management of the project management using modern ICT and software resources.

Communication and reflection component represents the experience of effective communication on the basis of information and experience of the relations of "man-computer", the ability to reflect and self-awareness of their own information activities; the specifics of communication through the use of the Internet, e-mail and other network resources, interactive communication technologies and based on reflection, critical analysis of the results of management activities and the ability to correct it.

III. CONCLUSION

Thus, in the process of research, we have formed a conceptual terminology of the study and formulated the concept of "information culture of the Project manager" as a basic invariant component of management activity and a complex individual and professional education that integrates professional theoretical knowledge in the field of information management and related disciplines, value attitude to information resources, personal qualities and practical skills that ensure the effective implementation of information activities in the development and project realization.

It is established that the model of formation of information culture of future Project managers should reflect general knowledge on the theory of management, operational management, organizational behavior and specific knowledge, which solves the manager in the process of information activities in the implementation of the project.

It should also be remembered that the high level of information management culture of the Project manager will facilitate the implementation of information technology in project management, which will lead to automation of project management processes and control over their implementation.

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