PEDAGOGICAL CONDITIONS FOR PROJECT MANAGEMENT STUDENTS' INFORMATION CULTURE DEVELOPMENT

Oksana Dubinina
PhD, Assoc. Prof., Dept. of research and organization, University of Education Management, Kyiv (Ukraine)

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Abstract. The article reveals the features and basic organizational and educational conditions for the development of project management students' information culture. It has been found that information culture implies students' information literacy, ICT knowledge and skills, general cultural development motivation, ICT-specific thinking, independence and creativity.

Key words: *ICT, informational and educational environment, university, information culture, project management students, student's information culture*

Problem statement.

The information and communication technologies (ICT) have become the determining factor in the development of modern society. Information is rapidly spread at the request of interested people and organizations and presented to them in the best way. The computerization of all aspects of life frees people from routine work and provides high work efficiency.

Education has become an important human activity and a key factor in social and economic progress. The latest strategic documents of the European Union (Lisbon Declaration, Copenhagen Declaration) stipulate that the development of information culture should be a mission of education. This can be done through the ICT-relevant teacher training, development of uniiversity wireless networks, regular hardware and software updates, as well as teaching ICT subjects.

The use of ICT in education can be considered as another educational revolution, because ICT change the very nature of students' thinking and personal culture.

It should be noted that the knowledge of organizational and educational conditions for the development of university students' information culture is of paramount importance for effective education reform in Ukraine.

Analysis of the recent research and publications. The problems of education computerization and ICT software and teaching methods development have been studied by a number of foreign and Ukrainian researchers, including O. Bakhtin, A. Baranovsky, B. Gershunsky, M. Golovan, M. Zhaldak, I. Marhela, E. Mashbits, N. Morse, D. Bird, D. Davis, V. Gorsky, R. Gurevich, M. Kademi, V. Rozumovsky, I. Petritsyn, K. Thomas and others, while different aspects of personal ICT culture development have been analyzed by G. Vorobyov, Y. Doroshenko, A. Yershov, L. Kalinin, V. Militariev, N. Rosenberg and others.

The aim of the article is finding out the features and organizational and educational conditions for the development of project management students' information culture.

Main results and discussion. There have been different approaches to understanding students' information culture development. Back in the seventeenth century educationists stressed the importance of child's reading comprehension skills [10].

Computer literacy is the foundation for students' information culture, which can be defined as the social level-specific thinking of the individual, i.e primarily the computer usage ethics in the context of universal values.

Information culture is an integral part of general culture that focuses on the information aspect of human activity.

Information culture reflects the levels of information exchange organization and the effectiveness of information creation, collection, storing, processing, presenting and using, which provides a coherent vision and modeling of the world, as well as the prediction of human activities results [7].

After studying informatics and ICT-based project management, project management students should develop the following main components of their information culture:

1. Knowledge of the nature of information and information processes and their role in understanding human creative activities, technical and social processes management as well as the connections of the living beings with the outside environment.
2. Knowledge of information presentation, evaluation, measurement, perception and understanding, as well as the relationship between the content and form and the role of information modeling in ICT [8].
3. Knowledge of the nature of informal, i.e. creative, components of thinking.
4. Abilities to set goals and assign tasks, formulate hypotheses, build information models of the studied processes and phenomena, analyze them using ICT tools and interpret the obtained result, systematize the facts, interpret and make conclusions, generalize the observations, predict the decisions consequences, as well as plan the actions to implement decisions and evaluate their results.
5. Ability to choose a sequence of work operations and actions and design an observation/experiment.
6. Computer skills, text, numeric and graphic information processing skills, database work skills, subject-oriented system usage skills, telecommunication systems skills.
7. Knowledge of the basic artificial intelligence principles. [4].

Students' ability to use modern ICT technologies (databases, knowledge bases, artificial intelligence systems, in particular, expert systems, video-text systems, telematics, information and other means of storage, processing, transmission and presentation of information) is important for the analysis of the processes and phenomena under consideration. At the same time, it is essential for students to have the necessary skills to organize, systematize, structure data and knowledge, as well as to have knowledge of information modeling, ways of presenting data and knowledge (tables, texts, thesauri, semantic networks, frames, logical output rules, etc.).

Equally important is students' ability to adequately formalize knowledge and interpret formal descriptions as well as to balance formalized and non-formalized components.

An important component of students' information culture is the knowledge of the basic algorithmization. Therefore, after developing the basic computer skills, it is advisable to study the algorithms construction principles (top-down step-by-step method) and the basic algorithms structure with the optional study of any procedure-oriented or declarative programming language [3].

All these concepts are of a general scientific nature and are, to some extent, the subjects of the basic study.

Programming, undoubtedly, plays an important role in computer science. However, it should be noted that most IT users are not and will not be programmers. Therefore, programming should be regarded as part of programmers' training and work and it is not a compulsory component of teachers/students' information culture, especially those studying humanities.

One of the main components of individuals' information culture is their ability to agree their interests with the social behavior norms as well as the conscious acceptance of the existing social restrictions and prohibitions.

Thus, skilled computer users need to be freely assessed in their activities, otherwise, they will not be able to set goals effectively, build models of the studied processes and phenomena, correctly interpret the obtained results, effectively use new ICT in professional activities and maintain the required level of knowledge [8].

These information culture components have a general educational and cultural significance. They characterize the basic knowledge and skills in the field of ICT and should be formed in relation to the type of training.

The analysis of the relevant literary sources has shown that individuals' information culture is associated with their computer literacy, computer culture and information literacy.

The concept of information literacy includes the following components: individual's

computer literacy, knowledge of the information environment and its laws, information finding and selection skills, information reuse skills and developed algorithmic thinking.

Computer culture is a term that covers and regulates the full range of aspects of work with ICT and telecommunication facilities.

Computer culture comprises students' knowledge of the ICT use methodology in various areas of human life, knowledge of ICT terminology, knowledge of the principles of computer technology, developed computer skills, knowledge of the basic modeling methods (mathematical, logical, didactic, etc.), knowledge of the principles of telecommunication networks functioning and skills in using them, the ability to interpret the results of practical tasks with the help of computers, the ability to set and achieve work-relevant objectives using structuring, algorithmization, programming and implementation, as well as observance of moral, ethical and legal norms in using ICT.

Information culture, as a concept, is much wider than other concepts. It better reflects the interaction of an individual with the surrounding information environment.

Students' information culture implies their information literacy, conscious motivation to meet ICT needs, general cultural, educational and professional development, developed ICT and telecommunication skills, and the relevant thinking style characterized by autonomy and creativity.

An analysis of existing definitions of information culture has shown that it is usually associated with personality. This is explained by the fact that culture does not exist without a person, i.e. the socio-cultural role of the individual is unique [5].

Information culture implies the technical and technological aspects of informatization, computer skills, the so-called information boom and significant information flows, and the availability of the Internet [5].

The theoretical analysis of the concept of information culture allows determining the following organizational and educational conditions for the development of project management students' information culture:

– methodological and content optimization of teaching;
– teaching of the optional Basic Information Culture course to project management students' to develop their information competence, information orientation, activity and self-determination;
– informatization of university educational and socio-cultural environment;
– use of ICT in students' education and self-education;
– organization of informational communication in the socio-cultural environment based on the students' information culture values.

Unfortunately, the existing objectives of ICT education do not allow training students for life in the information society. This can be done by the computer simulation course, which is a practical aspect of computer science. It shapes students' thinking and develops their ability to solve specific problems as well as improves their worldview and the scientific perception of the world [6].

We believe that the university ICT course should be professionally oriented and, besides computer literacy, develop project management students' general knowledge and skills, as well as their practical ICT competence.

The above-mentioned conditions are closely linked with the informatization of university educational and socio-cultural environment, which has the physical, psychological and intellectual components. The information environment physical component is a computer room, as well as administrators and teachers' work places. The information environment psychological and intellectual components include the human factor.

Informatization should cover both project management students' educational activities and leisure as well as motivate their information activities.

Particularly important is the development and application of training programs to promote students' adaptation to life in the information society. Each university should create the necessary social, psychological and educational conditions for the students to master ICT and develop a methodology for ICT use in education.

The use of ICT implies the organization of information communication in the socio-cultural environment, which improves project management students' communication skills, moral qualities and motivation as well as their attitudes to the communication agents and information received. The communication qualities of an individual include his/her ability to adequately perceive and assess other people's

opinions, present information in such a form that contributes to the productive discussion, find best solutions and make constructive programs to achieve common goals [11].

The information culture development depends on proper goal-setting, which is usually considered as the process of project management students' setting certain goals and objectives for themselves and/or others. The result of goal-setting is the planned result of the individuals' activities [14].

Conclusions.

Creation of a single intellectual and emotional space by means of Internet technologies, faces a problem of the combination of classical teaching with ICT-based education. Development of project management students' information culture can project management students' competitiveness on the labor market.

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