

## ТЕХНІЧНІ НАУКИ

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### **INFORMATION SYSTEM OF HIGHER EDUCATION INSTITUTION AS A COMMUNICATIVE TOOL INTEGRATION AND INFORMATION SPACE**

The current period of social development, updating all its fields of social and spiritual life requires a new level of education that would meet international standards [1]. In a globalized active knowledge of modern society, a new information society made implementation of information systems.

The analysis of previous studies indicates that the problem of the use of information systems in education dedicated to the research of authors: O. Glazunova, M. Mokriyev, V. Bykov, Buharkinoyi M., G. Gurevich, Mikhail Zhaldak, I. Zakharova, N. Morse, E. Polat, E. Patarakina, B. Yarmak, Tim O'Reilly and others.

Most higher education institutions (hereinafter – University) has one or more information systems (hereinafter – IS) that solve the problem as an educational and organizational and financial records. The most office automation plots University is local.

The only database of students and teachers may fully or partially absent. Current trends suggest IS design of integrated information systems (hereinafter – IIS) University [3, p. 40].

The aim of this work is to study information systems of higher education, as a means of communication and integration in the information space.

Organization management processes – one of the most important tasks in the life of the University. Modern information technology forced to reconsider existing ways of working with information and methods of control. Integration of information resources allows the use of modern methods of analysis of the educational process at the University, plan and effectively manage educational activities [3, p. 41].

Among well known in Ukraine learning management systems in higher education could include:

- automated learning management system for higher educational institutions of all levels of accreditation ASK «University», developed in the Institute of Applied Technology, which is part of information and production system «Education» [4, p. 168];

- learning management system for higher education «Directive», developed in LLC «Computer information technology» [4, p. 168];

- package «Dean» developed PE «Polytec-SOFT», which includes the module «PS Student».

Along with this, in many major universities operate and own development of such systems. They could be considered:

- information system management of higher education institution «University» Kherson State University;

- automated database of the Central Institute of Postgraduate Education;

- automation management institution operating in «Lviv Polytechnic»;

- automated information system «Electronic University», created in Khmelnytsky National University;

- a comprehensive automation system of learning management, developed and commissioned in the Lviv Institute of Banking of University of Banking, m. Kyiv (LIBS UBS NBU) [4, p. 168].

The principal activities of Universities are educational, methodical, scientific, financial, administrative, economic and social. The structure IS is determined by the IP existing structure controlling the University. Table 1 shows the most important subsystems.

Table 1

**Main subsystems Universities**

Subsystem «Educational process»	Subsystem «Interactions with branches and representative offices»	Subsystem «Science»
Subsystem «Social Work»	<b>(IS Universities)</b>	Subsystem «Personnel Activity»
Subsystem «Library»		Subsystem «Administrative activities»
Subsystem «Information»		Subsystem «Operational planning»
Subsystem «Logistics supply»	Subsystem «Financial Activities»	Subsystem «Economic activity»

Source: [3, p. 44]

As the basic model in most University IS uses a relational model of data. This approach, because of the rigid standardization organization data model IS to significantly simplify the integration of various subsystems in the case of local automation.

All IS subsystem integration offered based on the following principles:

- use data from a common data repository (integrated database) with the delimitation of access rights at the level of individual users and applications (selected indicators);

- the use of general directories;

- the exchange of information between subsystems based on a common information environment [3, p. 44].

The purpose of IS is to build an automated system for collecting, storing and processing data on the University and its affiliates, necessary for the operation of the University. Basic requirements for modern IS Universities:

1. Complexity – coverage of all areas of the University and integration into a single database of information flows.
2. Implementation of control functions based on the existing structure University and institutions existing at present forms of control.
3. Gradual harmonization with international standards of management structure, reporting, ways of storing and sharing information.
4. Common interface when working with the user in any subsystem [3, p. 42].

One of the goals of modern public policy in Ukraine in the field of education is to improve the infrastructure of information educational space. A prerequisite and a priority of the education system in Ukraine is its computerization. In this context, it is important to create appropriate electronic resources Universities.

The Law of Ukraine «On basic principles of the information society in Ukraine in 2007–2015 years» The strategic goals of the Information Society in Ukraine:

- provision of computer and information literacy, primarily through the creation of education focused on the use of new information and communication technologies in the formation of a fully developed personality;
- creation of national information systems and improve the information security in the use of new information and communication technologies [1].

Information sites Universities play an important role. They should be not only sources of information about the activities of the institution, but also a means of communication and integration in the information space.

Information system of higher education institution designed to create a single information environment interaction between teachers, students, trainers and other university employees together [2, p. 42].

The use of integrated subsystems that allow you to provide information for all users ensure transparency and consistency of data in a single information space – an integrated IS University [3, p. 48].

### References:

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4. P. J., Y. Information Rymar learning management system in higher education: a comparative analysis [Electronic resource]: <http://ena.lp.edu.ua:8080/bitstream/ntb/16045/1/24-Petrovych-167-175.pdf> – S. 167-175.