СЕКЦІЯ 1. ІНФОРМАЦІЙНІ ТА УПРАВЛЯЮЧІ СИСТЕМИ

PRINCIPLES OF EDUCATION QUALITY ASSESSMENT

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Today the improvement of the quality of education plays one of the key-roles in the development of Ukraine. When we develop the quality management system, it becomes necessary to identify the main processes in the university. The process of determining measures is one of the foundation elements of the quality management system. Many researchers underline the importance of qualimetric monitoring of education quality, but existing methodologies have specific disadvantages.

Education quality is a complex category that includes different objects and processes in the higher educational establishment. Different assessment objects require the development of different methodologies. However, despite of any methodology that we apply, we can set several main tasks: 1) definition of importance of indices of quality assessment; 2) expert method of indices values measurement; 3) calculation of the compound quality indicator; 4) big data volume for storage and processing.

To solve the above-mentioned tasks we need to develop the software. And as a result this developed software will lead to the improvement of measurement process. This software solves two main tasks: 1) automation of expert survey; 2) data storage that deals with quality assessment.

Solving the first task we need to consider: generation of survey application forms; on-line survey; process and storage the survey results. The opinion of experts is used to define weights of quality assessment indices. Calculation of weights of indices is based on pairwise comparisons. The algorithm uses the analytical hierarchical process method.

The task "data storage" includes such activities as add, delete, and update. Quality assessment is associated with the following information: hierarchy of properties of quality and indices for their assessment; reference and rejected values of indices; measurement scale of indices; the results of measurements; the value of compound quality indicator, etc.

The 3-tier web-based distributed application architecture is proposed. The presentation layer is presented by client's browser and web server with JSP; business logic layer – by application server with EJB components; data access layer is presented by database server MySQL DBMS. The JEE platform is selected as an software implementation platform. For database implementation the DBMS MySQL is chosen.

Implementation of developed software in management practice of higher educational establishments or their departments will enable to increase the effectiveness of decision making process.