

UDC 004.4: (658.56.378)

PROCESS MODELLING OF EDUCATIONAL ACTIVITY OF HIGHER EDUCATION INSTITUTION

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The general research problem is development of the model of a control system of higher education institution. Any modern organization making production, or providing services doesn't do without quality management system (QMS). One of the main elements of quality management system is the business processes model [1]. There is ISO 9001 quality management system standard that regulates process of development and structure of QMS.

Recommendations for the application of ISO 9001: 2000 in education were proposed at the intermediate meeting IWA 2 International Task Group Tralee, 2007 [2].

The higher education institution is a specific organization which has two directions of primary activity: training of specialists and science research activity. It is obvious that in this case at the A0 level of business process model there will be two processes: "educational activity" and "research activity". Each of these processes forms its own hierarchies of subprocesses. In this research the business processes model of educational activity of higher education institution was considered.

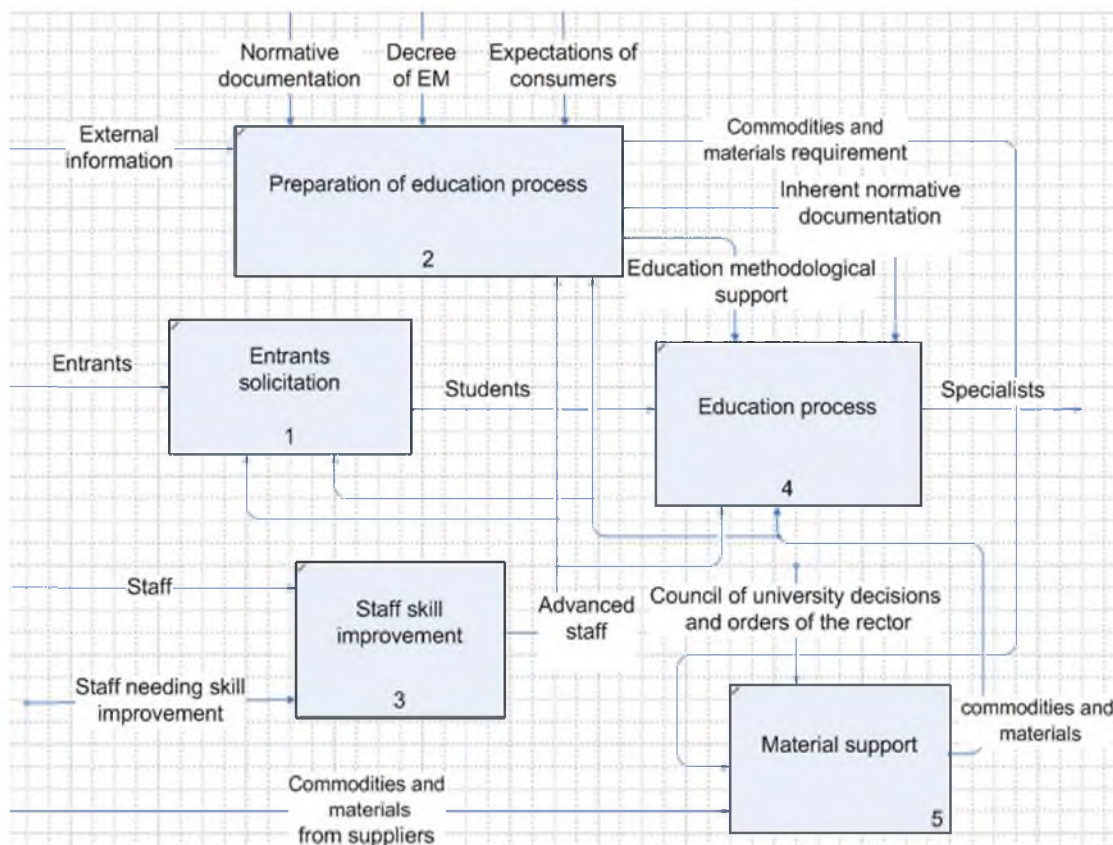


Figure 1 – Decomposition of process "educational activity"

Analogs of QMS standard objects and processes in managerial activity of higher education institution were revealed. After that decomposition of process "educational activity" was made. For determining of processes two main criteria were used [3]:

the process has to take place within one structural unit;

the process has to transmit object of management from an initial state into final, or intermediate.

At the following stage the information and commodity flows which connect subprocesses were defined. The chart A1 (figure 1) presents a result received.

The application Business Studio was used to build the model. This app has a lot of tools for visual design models and their analysis.

The developed model will allow to optimize business processes of a higher education institution, and also to carry out its reengineering.

References

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2. IWA 2:2007(E), Quality management systems – Guidelines for the application of ISO 9001:2000 in education
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UDC 621.01

KINEMATIC ANALYSIS OF THE WARP KNITTING MACHINE MECHANISM

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Let's consider a six-link double-crank mechanism for FNF warp knitting machines (England), kinematic diagram of which is shown in Fig. 1.

According to Artobolevskiy's classification [1] the mechanism refers to the complex mechanism of the third class.

Initial parameters for kinematic studies of the mechanism are the angular velocities of the links 1,2 ($\omega_1, c^{-1}; \omega_2, c^{-1}$), and the scale lengths of the mechanism kinematic scheme (K1, m/mm), shown in Fig. 1.

Projecting of speeds plan begins in undefined random scale $\left(K_V(\omega_2 = 0), \frac{m/s}{mm} \right)$, provided that the host link 2 is stable (Fig.2).