

DEVELOPMENT OF METHODOLOGY AND MODEL SYSTEM FOR COMPLEX HIGHER EDUCATIONAL INSTITUTION MANAGEMENT AS THE PART OF ECONOMICAL MODERNIZATION

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Keywords: multiagent system, professional specialist training, functioning levels, purpose functions and limitation, optimal strategy.

The article focuses on developing methodology and model system to maintain a higher educational institution as a multiagent complex implementing the optimal strategy of decision making as the part of economical modernization.

At the situation mentioned the social and economical system of professional training is subject to considerable changes that influence on selecting sufficient economical strategies concerning the changeable character of the market environment.

A crucial shift in relation to education following this process needs a new approach to structure and economy management of a higher educational institution. Within the bounds of the idea suggested a higher educational institution is the basic element of the multilevel professional training which is a structure elaborating various strategies of its functioning both in competitive and coordinated interaction with its other elements. The introduced approach is connected with the necessity of working out efficient mathematical models and mechanisms to study processes and management synthesis in a multiagent system of the kind.

Regarding the scope and the boundaries while completing the task of training specialists some essential points are emphasized.

1. Educational services market.

Higher educational institutions and customers purchasing the educational product (services) interact here as individuals and business units playing the role of management bodies (centres). The interrelated agents (active structures) are higher educational institutions which provide educational services, i.e. course training, additional training and further professional development. In the course of training students obtain the purpose competence-based qualification level.

2. Educational environment of a higher educational institution.

A competence-based qualification is formed in the process of education program oriented (EP) training. The level of the qualification is

determined by an education standard and (or) customer agreement.

In this case, the higher educational institution administration is the management body that maintains active units, such as educational structures realizing a special educational program by means of educational financing. These elements are specified as education-program system (EDS).

3. Labour market.

The necessity to extend specialist potential of a company influences the role of an employer (a business unit) as the subject of educational system interacting with a higher educational institution in forming competences that shape graduate competitiveness, as well as the demand in specialists trained. The employer needs defining the required level of their qualification and the amount of expenses. The employer's management body is the centre, and its departments (their financial independence provided) are active units that produce requirements to specialists' competence level according to the production target.

Three basic subsystems (functioning level) stand out while studying the whole system forcing strategies:

1) "Educational services market - higher educational institution" (Strategy 1);

2) "A higher educational institution - employers" (Strategy 2);

3) "Higher educational institution administration centre (AC) - EDS" (Strategy 3).

Economical and mathematical models and mechanisms are used in carrying out a strategy.

This methodological approach to study processes of specialist training as an active multiagent system means coordinating of all its units and developing organization and economical management of a higher educational institution.

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