Training of organizational and managerial personnel responsible for the environmental safety strategy

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Abstract. The article discusses the reasons for the inconsistency of the university training program for organizational and managerial personnel responsible for the environmental safety strategy in the areas of study implemented at the university, taking into account the international requirements of the ESG strategy, which comprehensively evaluates all factors: social, environmental and managerial, both on the production system and on the environment and is being widely implemented in various global business firms.

The main ways of improving the quality of training of organizational and managerial personnel responsible for the creation of new enterprises and the improvement of existing ones in order to ensure high efficiency of environmental safety and life support are determined. A program of disciplines and methods have been developed to ensure the process of its implementation.

1 Introduction

In recent years, the most important and discussed topic has become the problem of environmental safety and environmental protection. At the same time, the training of highly qualified organizational and managerial personnel responsible for environmental safety is the subject of constant concern of the state and an important component of the strategy for sustainable socio-ecological and economic development of the country.

It should be noted that at present there is a shortage of highly qualified organizational and managerial personnel in the field of environmental safety and environmental protection, who are able to solve the tasks and develop strategies at a completely new environmental-economic and environmental-technical levels, fully possess fundamental knowledge and design skills. To increase the competitiveness of domestic manufacturing enterprises and implement the problem of import substitution, new requirements are needed for the level of personnel qualification, new approaches to solving modern problems, knowledge and skills of employees, to ensure the implementation of relevant goals in modern conditions.

To improve the effectiveness of training, universities are introducing new information systems and new teaching methods [1]. One of the innovative projects in the educational activities of universities is the implementation of the project of integrating the educational activities of universities.
2 Materials and methods

In order to bring our education system closer to modern requirements at minimal cost, the authors propose to organize the training of organizational and managerial personnel responsible for the environmental safety strategy, in the areas of training implemented at the university.

Based on modern realities, it is obvious that rational management of any organization is possible only when rational management of labor resources and rational management of its technical means are carried out simultaneously, taking into account environmental safety and environmental protection [5]. The existing profiles of managers who produce economic departments in large numbers cannot manage production, since they do not study technologies and production designs taking into account environmental factors, and therefore such a function as managing its technical means and methods of their environmental safety is not performed. The training program for environmentalists, in turn, reflects well the issues of environmental protection, ecology and life support, but does not provide knowledge in the field of organization and management of production and methods to improve its efficiency through the introduction of breakthrough technologies.

Currently, the curriculum connecting management, technology and environmental safety is developed only for the narrow specialty of energy managers, which can be effectively implemented for building complexes and housing and communal services systems [8].

The main goal of a manufacturing organization is to maximize profit while realizing its main mission. For any manufacturing enterprise, the level of overall efficiency, $E$, can be expressed through two components [5]:

$$E = E_1 \times E_2$$

where $E_1$ is the level of external efficiency (the degree of use of market opportunities); $E_2$ - the level of internal efficiency (the degree of use of internal capabilities).

External efficiency ($E_1$) evaluates the company's strategy in market conditions. If earlier this strategy was expressed through a marketing system, then at present, in world practice, it is expressed through the ESG strategy ($E$ - ecology, $S$ - social policy, $G$ - corporate governance), which comprehensively evaluates all factors: social, environmental and managerial as on the production system and on the environment.

The environmental factor ($E$) includes:
- rational use of natural resources;
- reducing emissions of carbon and harmful substances into the atmosphere;
- solving problems related to environmental pollution;
use of "green" technologies.

The social sector component (S) contains the following indicators:
- attitude towards labor resources, such as: working conditions, career prospects, health protection, labor protection, etc.
- responsibility for the quality of products and the process of its implementation;
- social benefits to ensure the living conditions of employees.

Corporate governance block (G):
- company management using modern technological processes;
- organization of the introduction of "breakthrough" technologies;
- corporate social responsibility.

The level of internal efficiency (E2) is provided by production management.

The effectiveness of production management is largely assessed by the total productivity of labor $C$.

$$C = U \times T \quad (2)$$

where $U$ - is the level of individual labor productivity;
$T$ - is the level of productivity of organizational and technical means.

At the same time, $U$ largely depends on the indicators of external efficiency $S$ and $G$,
and $T$ depends on the indicators $E$ and $G$. Thus, the ESG system is decisive for the improvement of complex production systems. Therefore, in order to increase the efficiency of the production process in various fields of activity, it is necessary to train organizational and managerial specialists who can develop strategic projects for improving production systems and processes [9], as well as ensure their operational management, taking into account environmental safety, environmental protection and life.

For this, it is proposed to introduce the following cycle of compulsory disciplines into the training system of organizational and managerial personnel responsible for the strategy of economic security, using functional cost analysis [10, 11], the project method and the Singaporean training system.

The average curriculum of the direction of training 23.03.01 Technosphere safety can be taken as a basis, the training profile "Life safety in the technosphere". Table 1 presents an extract from the curriculum of the 3rd and 4th courses of study.

Table 1. Curriculam excerpt for profile "Life safety in the technosphere"

<table>
<thead>
<tr>
<th>III COURSE</th>
<th>FIFTH TERM</th>
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<tbody>
<tr>
<td>Disciplines</td>
<td>Watch</td>
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<tr>
<td>Life safety</td>
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<tr>
<td>Reliability of technical systems and technogenic risk</td>
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<tr>
<td>Anti-Corruption Behavior/ Human Rights</td>
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<tr>
<td>Technologies and equipment of industries</td>
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<td>Legislative and regulatory support for process safety</td>
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<tr>
<td>Basics of design and CAD</td>
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<tr>
<td>Ecology</td>
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<td>Production waste stream management</td>
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<tr>
<td>SIXTH TERM</td>
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<tr>
<td>Supervision and control in the field of security</td>
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<td>Industrial safety</td>
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</table>
This curriculum can be supplemented with the organizational and managerial disciplines presented in Table 2 without changing the total volume of the teaching load.

<table>
<thead>
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<th>Table 2. Recommended disciplines</th>
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<tbody>
<tr>
<td>Management</td>
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<tr>
<td>Human resource management</td>
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<td>Methods for making organizational and managerial decisions</td>
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<td>Systems Improvement Strategy</td>
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<td>Sustainability management</td>
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<td>Creative Thinking Technology</td>
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<td>Economy</td>
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<td>Functional cost analysis</td>
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<td>Disruptive Technology Management</td>
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<td>Project management</td>
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3 Results
In the first year, the learning process is the same for all training profiles. At the second stage, after the first year, as a result of competitive selection, students with pronounced abilities for managerial activities are determined, while it is advisable to use special tests to assess their abilities for this type of activity.

For the effectiveness of this system of training specialists, it is proposed to include competent representatives of enterprises in the composition of the commission for assessing the defense of theses, for an objective assessment of the practical significance and novelty of final qualification works and for determining the candidates for graduates who it is desirable to invite to work.

4 Conclusion

1. In the context of sanctions and the rupture of many economic ties and the preservation of high requirements for improving environmental friendliness and life, the existing education system does not allow preparing highly qualified specialists in order to improve the work of existing enterprises and create new ones.

2. To increase the competitiveness of domestic enterprises and implement the problem of import substitution, it is proposed to organize the training of organizational and managerial personnel, who must have a synthesis of knowledge in the areas of management, life and ecology.

3. For the learning process in the proposed specialty, a program, a set of disciplines and basic methods of implementation have been developed.

References

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