Employment and Professional Adaptation of Specialists

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***Abstract*— Professional adaptation of specialists takes place not only after the stages of employment, but also with changes in technology, regulations, production culture. At the same time, forecasting the level of staff resistance to changes will reduce the additional costs, build an adequate system of professional development and prepare personnel for changes. This publication examines the example of determining the degree of resistance of personnel to changes in the requirements of the international standard ISO 9001. The calculation of the resistance level is based on the comparison of the requirements of the international standard ISO 9001 and the current quality management system. An analysis of the perception of the quality management system by employees was based on the questionnaire survey of the heads of structural divisions. Further, the results of the questionnaire were compared with the semantic model of the international standard ISO 9001. The level of inconsistency indicates the possible resistance of personnel to the introduction of new requirements.**

Keywords*— professional adaptation; ISO 9001; quality management

I. INTRODUCTION

The application of ISO 9001 is often followed by great resistance [1]. The understanding of the reasons of resistance and their elimination will allow to reduce terms of introduction of the standard [3–5]. To understand the reasons of resistance, it is necessary to establish differences between the ISO 9001 model and the management model in the enterprise. But at the beginning to note the accepted assumptions:

- ISO 9001 is based on the words-concepts;
- analysis of words-concepts is carried out through the estimation of their frequency [2];
- frequency of words-concepts reflects their significance.

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II. ANALYSIS OF THE STANDARD

Having selected the words-concepts, we will analyze the change in the ISO 9001 standard from version to version.

As it is possible to see, requirements of ISO 9001 change from questions of compliance with the instructions (1994) to requirements for the management of organizations. As a result, the product itself has smaller value than management.

The data on the frequency of word-concepts in the model ISO 9001 of 2015 year is presented on the Fig. 5.

Fig. 1. The ISO 9001 model of 1994

Fig. 2. The ISO 9001 model of 2000

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Fig. 3. The ISO 9001 model of 2008

Fig. 4. The ISO 9001 model of 2015

As you can see, the requirements of the ISO 9001 standard change from compliance with the instructions (1994) to the requirements for the management of organizations. As a result, the product itself is of less importance than management.

Let's present data on the frequency of word-concepts in the model ISO 9001 of 2015.

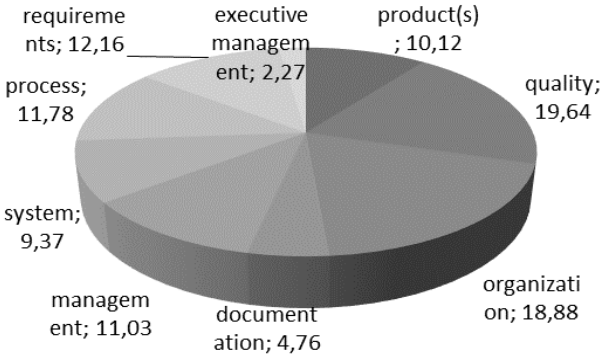

Fig. 5. Frequency of words-concepts in ISO 9001 2015

III. ASSESSMENT OF THE IMPORTANCE OF WORDS CONCEPTS IN MANAGEMENT OF THE ENTERPRISE

We have conducted a questionnaire of the heads of enterprises to assess the significance of the word-concepts in the enterprise management. For that comparison of voices in questionnaires of data with an estimation of frequency of words-concepts. Then the data presented in the questionnaires was compared with the results of estimating the frequency of the word-concepts.

This has established the following:

1. what is the correspondence of the management models of organizations and the one proposed in the standard;
2. what is the level of potential resistance of staff to the implementation of ISO 9001;
3. what kind of training program for the professional development should be offered.

TABLE I. SURVEY RESULTS

№	Words-concepts	ISO 9001	Production organization	Service organization
1	Product	10,1	11,2	11,1
2	Quality	19,6	12,5	11,1
3	Institution	18,9	10,0	9,7
4	Documents	4,8	8,8	9,7
5	Management	11,0	11,3	13,9
6	System	9,4	12,5	11,1
7	Processes	11,8	11,3	11,1
8	Requirements	12,1	10,0	9,7
9	Leadership	2,3	12,5	12,5

The greatest resistance should be expected at work with documentation. With some probability organizations will not be able to move from management on the basis of the word-concept "documentation" (version 1994) to management by the word-concept "documented information" (version 2015 year).

Significant differences in the testimony of the word-concept "leadership" is due to the fact that the questioned did not see the difference between "leadership" and "management."

Applying a simple calculation procedure based on the assessment of the correlation between respondents' answers and the frequency of the word-concepts, it is possible to claim that the resistance level can be 0.4 for enterprises of both spheres. From the obtained results we can conclude on the need of radical reorganization in management of documentations.

IV. RESULTS AND DISCUSSIONS

As a result, the new method for assessing the compliance of the international standards requirements with the management of organizations in relation to the existing management model of the organization is presented. Based on this analysis, it is possible to predict the staff resistance level personnel to the introduction of new requirements.

The positive aspects of the method include:

1. identification of fundamental issues of adaptation of new requirements to the existing management model;
2. small financial expenses;
3. the results of the analysis can be discussed right after the questioning.

The limitations of the method include:

1. It is applicable only for the standards imposing requirements to management.
2. The significance of the words-concepts should be defined either on the basis of their frequency, or to be explained by developers.
3. The standard should be based on independent words concepts.

The use of this method can be carried out to assess the degree of resistance at several levels of management. As a result of this work it can be concluded that ISO 9001 should be interpreted at various levels of management in different ways, because everyone is responsible for the implementation of individual requirements within the position at work rather than the standard in general.

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