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Methodology of enhancement of linguistic competences of research and educational higher school personnel

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Abstract

The problem of linguistic competences of higher school personnel as one of the main problems, not allowing Russian higher education school to count on leading positions in the world university rankings, is discussed in this paper. Within the framework of the article the authors formulate a possible approach to the establishment of the strategy of linguistic competences development in a higher school. The authors are implementing this work on the basis of National research Tomsk polytechnic university (NRTPU). The methodology of the analysis of possibilities of linguistic competences development, search of the mechanism of measures implementation by their development, and identification of "gaps" or difficulties in implementation of these measures are presented in this article. For solution of the assigned objectives the parameterization of measure characteristics and their subsequent statistical processing are applied.

1. Introduction

Historically developed isolation of the domestic education of our country during the soviet period was connected with the definite tasks of building an ideal society, where, as it was assumed, we determined the priorities of development (and which was not justified in the course of the historical development of Russia). Besides, the soviet society itself in its imperial and soviet state never historically oriented at the necessity of full-scale interaction with outer world (except for some part of our elite). Therefore, linguistic training at all levels of the educational system (primary, secondary, higher) was not among the most important priorities. This is one of the reasons, which does not allow our Russian school of higher education to rely on "swift victories" in the effort to occupy the leading positions in the world university rankings. Among other reasons, affecting the implementation

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of the key indicators, it is possible to single out low academic mobility, teachers' unreadiness for international collaboration, and weak interaction of the Russian scientific schools with leading world research centres.

2. Methodology of programme designing for linguistic competences enhancement

This work is directed at solution of the problem concerning enhancement of the level of linguistic competences of higher school personnel. As an illustration of understanding of the significance of the current problem it is possible to note that linguistic competence in the university roadmap of the development of Tomsk polytechnic university (TPU) is considered to be as one of the effective tools, allowing implementation of the number of key indicators. Among them there are such indicators as:

R1 conducting researches of the global level;

R2 establishing unique educational programmes, with the increase of the portion of programmes in a foreign language;

R3 replicating the best academic and engineering practices;

R4 establishment of the strategic partnership with world academic communities;

R5 involvement of scientists and teachers of world reputation in establishing of international academic society and scientific network schools in order to arrange effective knowledge transfer;

R6 transformation of a higher school into a university of a research type, oriented at preparation of top specialists, predominantly, masters and post-graduates;

R7 introduction of a multilevel mass electronic system of education, including teaching professional courses in a foreign language (Ibrayeva, 2014).

These indicators can be considered as technical requirements to the established programme of enhancing linguistic competences. The achievement of such indicators requires development of the measures and mechanisms of their realisation, identification of the "gaps" or difficulties during their implementation. These kinds of measures can be represented by:

- Invitation of the leading world researchers for teaching disciplines and conducting scientific studies
- Arrangement of the internships in the leading universities and scientific centres of the world
- And et cetera.

Proposed measures should be subjected to analysis according to the principle of cross expertise. The expertise is conducted according to the following scheme: requirement→expected result→available resource→necessary resource.

The conducted expertise allowed establishing a number of measures, necessary for achievement of the indicator in the form of proposed requirements.

To order and visualize the data according to the list of measures it is necessary to turn to the method of linear analysis. This method implies ordering the measures in a linear way and conducting a correlation with each technical requirement. This allowed formation of the matrix of correlation of technical requirements, identified with the indicators of the roadmap of the university as a leading university of the country, and measures on their implementation taking into account risks and required budget (Hicks, 2013). This way of data structuring facilitated the determination of measures frequency, which in consequence gave an opportunity to divide the list of measures into:

1) universal ones, that is, those which work in one way or another for the benefit of all the list of the requirements;
2) measures of high degree of significance, that is, those, which have the frequency of mentioning more than 85%;
3) measures of low degree of significance, which were mentioned less than 30%.

Data on the developed measures can be easily represented in the form of the table (table 1). Each measure is correlated with risks, which can arise during its implementation, and the budget required for realization of one particular measure.

Table 1. Correlation between measures, directed at enhancement of linguistic competences, and technical requirements.

Measures	Risks	Requirements							
		T1	T2	T3	T4	T5	T6	T7	Budget
Invitation of the leading world researchers to TPU for collaborative teaching disciplines and conducting scientific researches	Reduction of a number of (research educational employees) REE already employed in TPU; Creation of the negative image about TPU abroad; Inconsistency between expectations of a foreign specialist and a real situation	+	+	+	+	+		+	150,0 rub. per REE Risk assessment: 60%
Arrangement of linguistic internships in the leading linguistic schools.	Employment of the gifted graduates, who were relied on by the departments, abroad		+	+	+	+		+	120,0 rub. per REE Risk assessment: 20%

3. Measures for enhancement of linguistic competences of the personnel

The authors of the paper proposed a number of measures for enhancement of linguistic competences and in accordance with the methodology described above these measures were correlated with technical requirements. The results of this work allowed dividing the suggested measures into 3 groups. Thus, the following measures were placed into the category of the universal measures:
1) arrangement of the professional internships in the leading universities and scientific centres,
2) development of the distant forms of scientific educational communication and ongoing additional education,
3) development of the flexible system of FL acquisition with the use of the network and local information resources,
4) inclusion of FL knowledge into qualification requirements of REE and introduction of this clause into effective contracts (in accordance with the evaluation criteria, adopted at the university).

The measures of high importance were formulated in the following way:
1) involvement of the native speakers into organisation of communicative practices,
2) invitation of the leading world researchers to TPU for collaborative teaching disciplines and conducting scientific researches,
3) establishment of network scientific educational clusters for promoting research works to the international level,
4) establishment of the incentive system for motivating to FL study and its use in professional practices of REE and in students' education,
5) development of flexible programmes of academic and professional mobility for REE, working out the criteria of internship effectiveness.

According to the results of the analysis, less important measures for achievement of the goal due to the reasons of their low efficiency, high risks or high costs, are the following:
1) arrangement of educational courses in FL according to the principle of modular teaching,
2) establishment of the virtual educational platform on the basis of the gamification technology (internet-lyceum),
3) introduction of the mechanisms of selection and rigorous account for those who go abroad for internships,
4) arrangement of short-period training with the purpose of familiarization with educational and information technologies.

That would be a mistake to decide only in favour of the results of linear analysis without conducting an alternative verification of the obtained data. An alternative in this case can become a parameterization of the

selected criteria and their statistical processing. For this purpose, the indicator values, obtained by means of the method of expert evaluation, were converted to the corresponding coefficients. Conversion of the indicators into coefficients was implemented in such a way that more beneficial indicators values, from the point of view of a consumer, had greater coefficient values (Vidayev, 2014). Then, by means of coefficients multiplication, the integral "significance coefficient", taking into account the contribution of all selected indicators at once, was obtained. An example of this kind of processing is presented in table 2.

Table 2. Priority of the measures on the basis of determination of significance coefficients.

№	Name of the measure	Requirement №	Risks	Costs, m. rub.	Requirements coefficient	Risks coefficient	Expenditure coefficient	Significance coefficient
8	Development of the flexible system of FL acquisition with the use of network and local information resources	7	0,8	0,5	1	0,8	15,95	12,76
4	Development of distant forms of scientific educational communication	7	0,8	8	1	0,8	15,2	12,16
15	Inclusion of FL knowledge into a qualification requirements of REE	7	0,8	0,05	1	0,75	15,99	11,996
25	Establishment of the system of incentives to FL study	6	0,7	4	0,857	0,7	15,6	9,36
2	Arrangement of linguistic internships	5	0,8	5	0,714	0,8	15,5	8,8571

4. Conclusion

In conclusion let us note that the conducted work is aimed at development of the methodology of establishing the strategy to enhance the linguistic competences level of higher school personnel. We draw attention to the fact that the process of strategy development is not limited by determination of the general directions of the development, which will provide the basis for promoting and strengthening of the positions. The highlighted strategy can be used for development of strategic and practically oriented projects. The role of the strategy consists in, first, assistance in focusing attention on definite problems and potential ways of their solution, second, concentration of the attention on the identified prioritized directions, having put aside the rest of the directions as optional prospects in the long-term development.

The results of the work on establishment of the strategy of linguistic competences enhancement can be useful for any higher-educational institution, planning similar goals and objectives. The study does not claim to be complete; it only provides recommendations when establishing a specific plan of actions. As a recommendation we can state that the next step should be of applied nature and should imply the development of

the total packages in each of the directions according to scheme similar to the mentioned one, but with introduction of specified budget and levels of responsibility, where all stakeholders perform specific functions assigned to them.

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