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## Competence-Based Assessment Model of Interdepartmental Interaction Efficiency within Higher Educational Institution.

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### ABSTRACT

The article describes the competence-based assessment model of interdepartmental interaction efficiency within higher educational institution and results of its use with creation of average profile of assessment for interaction competences, and also a rating of departmental heads according to manifestation level of professional interaction competences.

**Keywords:** professional interaction competences, competence-based model, rating point, awareness index, criticality index.

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Today it is impossible to represent higher educational institution activity in terms of educational, scientific, economic activities only. Today the higher education institution is a system of interacting subdivisions which are of multipurpose character. Current performance indicators of higher educational institution as well as prognostic ones depend on competence of departmental heads to ensure coherence, integration, and involvement of a department as a whole.

The size of teaching staff, the average age of employees, academic position and qualification, etc refer to the level of accreditation indicators of personnel potentiality in higher education institution activity. They form external indicators for assessing performance efficiency of higher educational institution.

Competence of departmental heads to provide functional interaction within the higher educational institution is the priority parameter of their activity at the level of internal indicators.

On the basis of declared sense, we have developed and approved competence-based model for assessing interdepartmental interaction efficiency within higher educational institution. To assess head competences to interact with departments we use substantial characteristics referring to the procedural indicators which integrate objective and subjective sense of interaction instead of resulting indicators.

In this regard it would be useful to represent results and generalizations of the competence-based assessment of interdepartmental interaction efficiency in the Kursk State Medical University (KSMU), which is the educational system with 80-year history and difficult multilevel organizational structure.

The procedure of competence-based assessment of interdepartmental interaction efficiency of KSMU has been carried out with use of modified method «360-degree feedback» developed in 1997 by Peter Ward. The latter is aimed at systematic collection of performance data on individual or a group derived from the environment. This method has been widely applied in the West in the 1990's [2]. In the beginning of 2000's the Russian experts began to use this method in the organizations of various orientation, mainly financial, buying service and industrial. There is no reference to its use in the activities of educational institutions in Russia.

Having estimated benefits and limitations of this method for the competence-based assessment of interdepartmental interaction efficiency within the higher educational institution, we find it necessary to modify the method and to include substantial and technological changes in its procedure.

Procedure of the competence-based assessment of interdepartmental interaction efficiency of KSMU took place in November, 2013. Heads of 38 departments participated in the procedure.

Procedure has been conducted according to the following algorithm:

- Motivating and instructing participants of assessment procedure;
- Heads select the structural subdivisions;
- Assessment of competences ensuring efficiency of interaction by the head department [1].

Procedure's goal is to assess competences of professional interaction in the system "the head – the head" at the level of co-assessments of heads, and also to determine a rating of competence-based estimations of professional interaction at the department heads of KSMU.

To avoid any ethical issue we have coded the list of heads of department declared for participation in the assessment procedure from 1 to 38.

The competence-based assessment of interdepartmental interaction efficiency within the higher education institution is adequate to determine efficiency of interaction according to the following criteria: coherences; involvement; integration of interaction.

Competence is defined as a set of skills, qualities or abilities of the head significantly influencing on the efficiency of interaction.

Assessment is represented by traditional five-point scale (1 – minimum low mark, 5 – the highest one) with rounding to the tenth. This indicator is absolute. The employee's result depends only on the marks given by his/her colleagues. The application of the modified 360-degree feedback method permits to assess participants on the basis of cross-evaluations and rating according to predetermined competences. Rating is the special indicator used to introduce the assessment results. Ratings are usually expressed as percentage and enable to compare the results received by different participants. The ratings are presented in ascending order for each competence. At the left side there are experts with low points, on the right – ones with high scores. Ratings of heads for each competence are presented in figures. Individual profiles have been prepared on each employee and presented in a confidential manner. Averages are presented for each respondent.

To define the level of significance, it is necessary to define how far from the middle a participant is situated. Estimations lying far from the middle are of the greater relevance.

Rating is the number showing what percent of other participants gain points smaller than he/she has on certain competence. The rating point shows a place of the participant in the rating and is regarded to be a relative evaluation. Rating identifies the participant scores.

The rating of the participant, who is in the middle of a rating, is equal to 50. The participant located closer to the end of a rating (with lower points) has always less than 50, one located at the top of ranking (with higher estimations) approaches to 100 points. So, each head is given by two own evaluations on each competence including absolute (on a 5-mark scale) and relative (rating).

Relative indicators permit to distinguish more accurately results of employees (especially at rating edges), to reduce the influence of social desirability of answers (a usual tendency of employees to give the overestimated evaluations to the colleagues).

**Figure 1: Content of professional interaction competences**

No	Competence	Indicators
1	Ethic of relations	- avoid taking personal stance in the conflicts - be open to the help and advise; - avoid taking personal stance of criticism
2	Managing changes	- changes one's behavior a situation demands; - uses different ways in solving tasks.
3	Personnel Management	- gives the concrete plan of action to employees; - is interested in the progress of employees; - delegates authority to employees
4	Leadership	- takes the initiative and don't afraid of competition; - offers tasks and solutions.
5	Achieving goals	- provides effective achieving of the purpose; - provides search for resources to perform tasks
6	Understanding and networking with colleagues	- constructive in interaction with colleagues; - participates in the solution of joint tasks.
7	Decision-making	- finds the alternative solution if the plan doesn't bring success; - makes the decision in established periods; - consecutive in decision-making; - accomplishes solution
8	Influence	- capable to convince the interlocutor; - offer the logical argument; - understand employee needs and motives of actions.



**Figure 1: Averaged profile of interaction competences assessment in whole organization**

Regarding results of an averaged profile interaction competences assessment in whole organization, constructed on absolute values, the following tendencies should be noted (see figure 1):

First, the overall level of estimations on all competences varies in the range from 4,38 to 4,61 that on the one hand indicates sufficiently high level of interaction competences realization, on another hand, social expectancy of respondents' answers

hasn't affected the results differentiability so that it is possible to determine zones of deficiencies and advantages;

Secondly, competences which form the resource content of superior's competence (understanding and networking with colleagues , achieving goals, leadership) and limited introduction of changes have been identified. These indicators can be considered as guidelines for assessing dynamics of interdepartmental interaction within the higher educational institution.

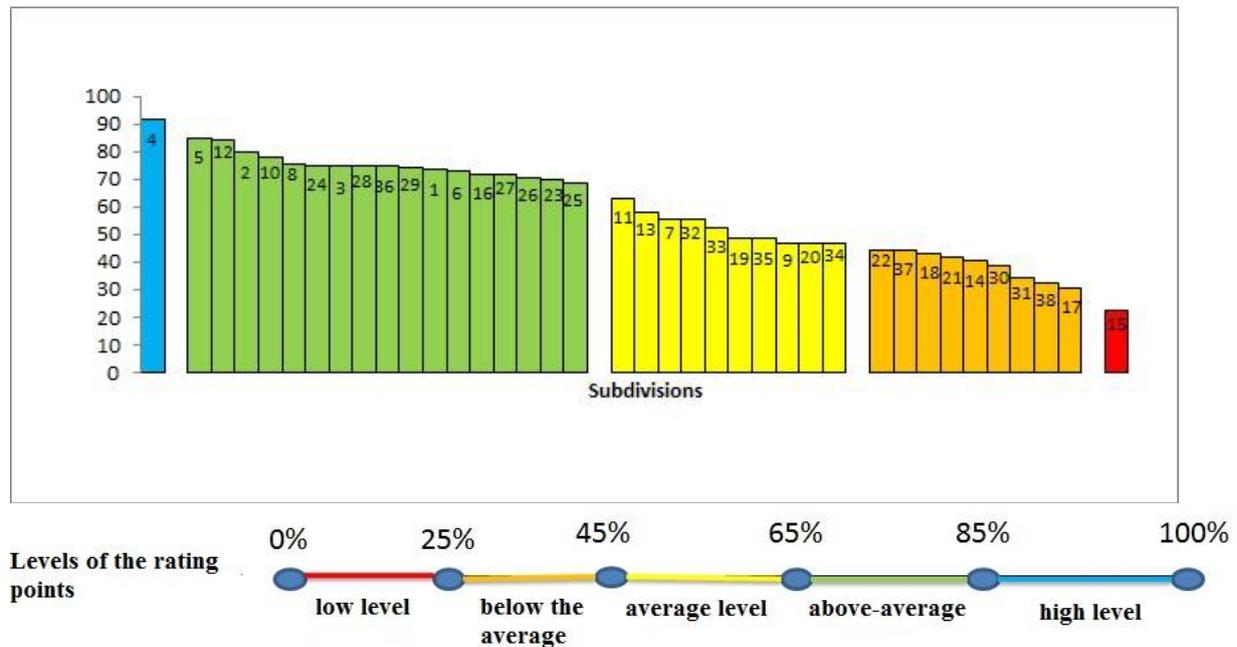


Figure 2: Rating of departmental heads by the manifestation level of professional interaction competence "Ethics"

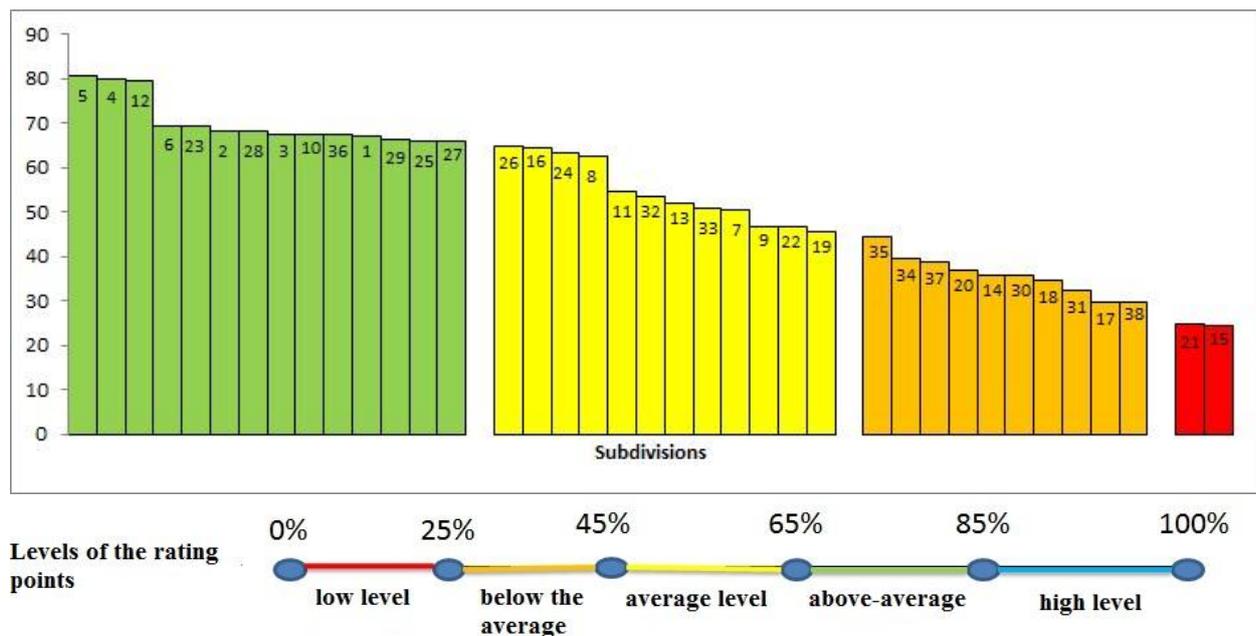


Figure 3: Rating of departmental heads by the manifestation level of professional interaction competence "Managing changes".

Summarizing results of the rating on professional interaction competence "Ethics", it should be noted that 26,32% of have received low as well as very low points on the scale of relative values that proves the necessity to strengthen corporate culture and etiquette, to enter and support ethical schemes of interaction (see figure 2). There's no sense to formalize this message and lead up to the point of absurdity but the academic etiquette indicates quality of higher education.

Professional interaction competence "Managing changes" has received the minimum values on absolute measures and the highest percent on the rating points, getting to a zone of low and very low values (31,58%). That is, actually, a third of heads of structural divisions don't reconstruct their behavior when the situation changes and use stereotyped ways in solving interaction tasks (see figure 3).

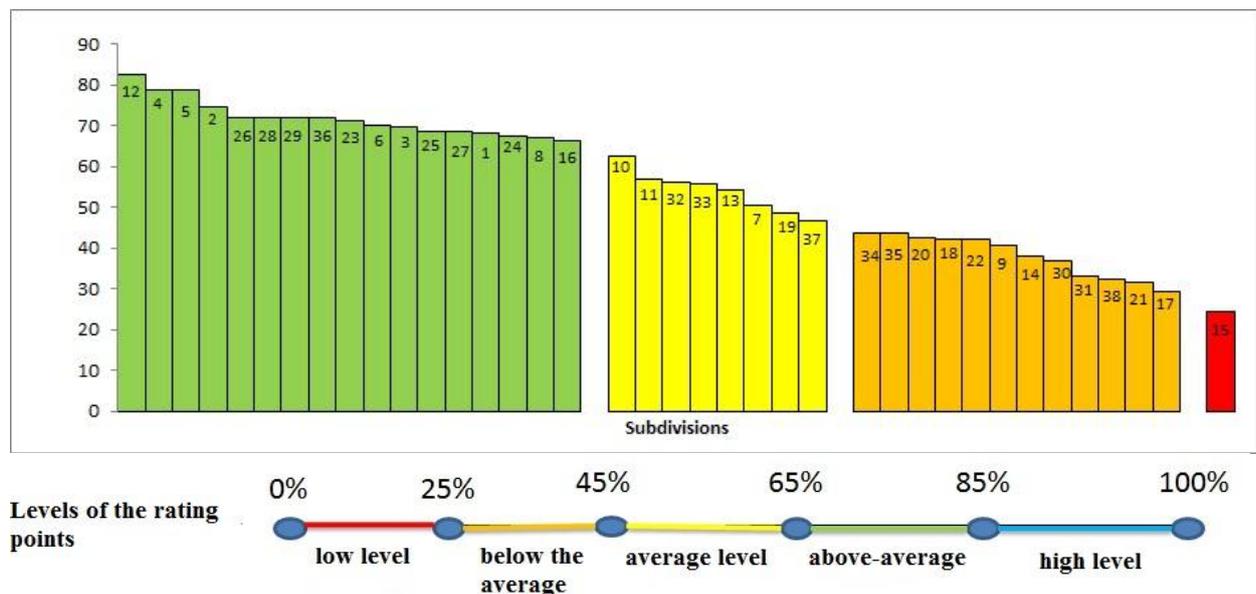


Figure 4: Rating of departmental heads by the manifestation level of professional interaction competence "Personnel management".

Professional interaction competence "Personnel management", offering concrete plans of action to employees and delegating authority, is presented by results tending to a third of heads receiving low (31,57%) rating points as well as very low (2,63%) (see figure 4). The results obtained indicate the necessity to carry out an interaction efficiency assessment at the level of structural divisions, -i.e., in the "head-subordinate system".

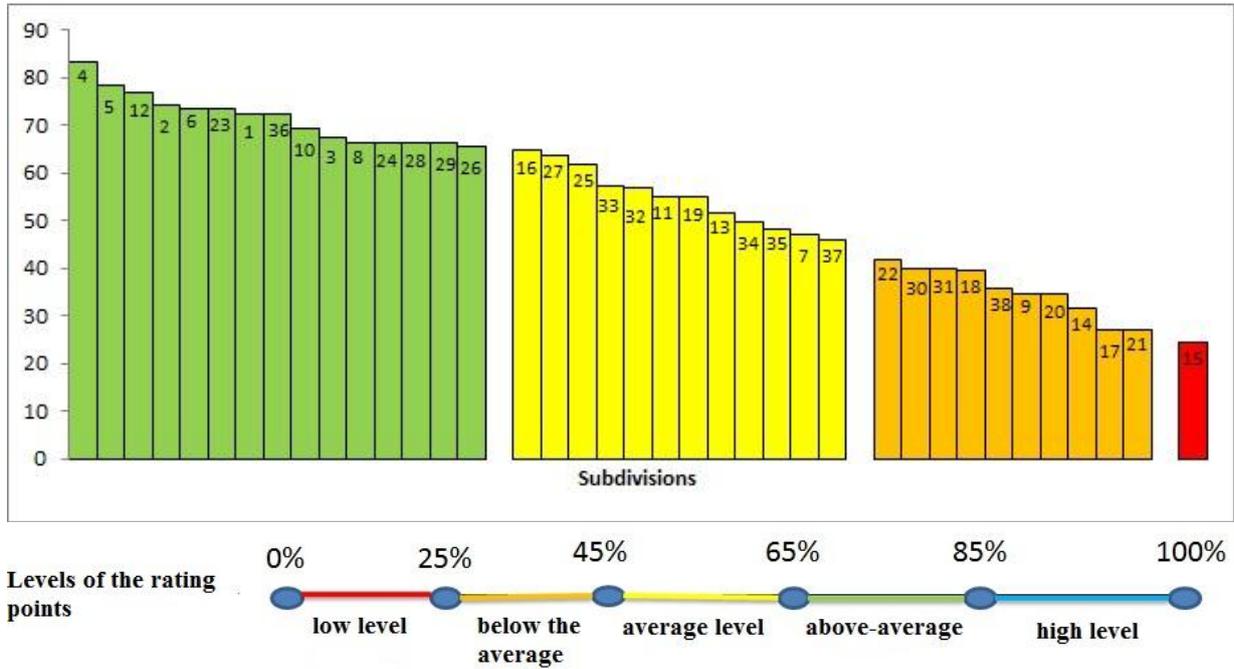


Figure 5: Rating of departmental heads by the manifestation level of professional interaction competence "Leadership".

Professional interaction competence, or "Leadership" refers to the initiative of the heads, and their involvement in the competitive relations: has received the maximum value on absolute measures. Actually half of the heads of department within the higher educational institution have received the high ratings of 44,74% permitting leadership to be regarded as a key resource for departmental heads (see fig. 5).

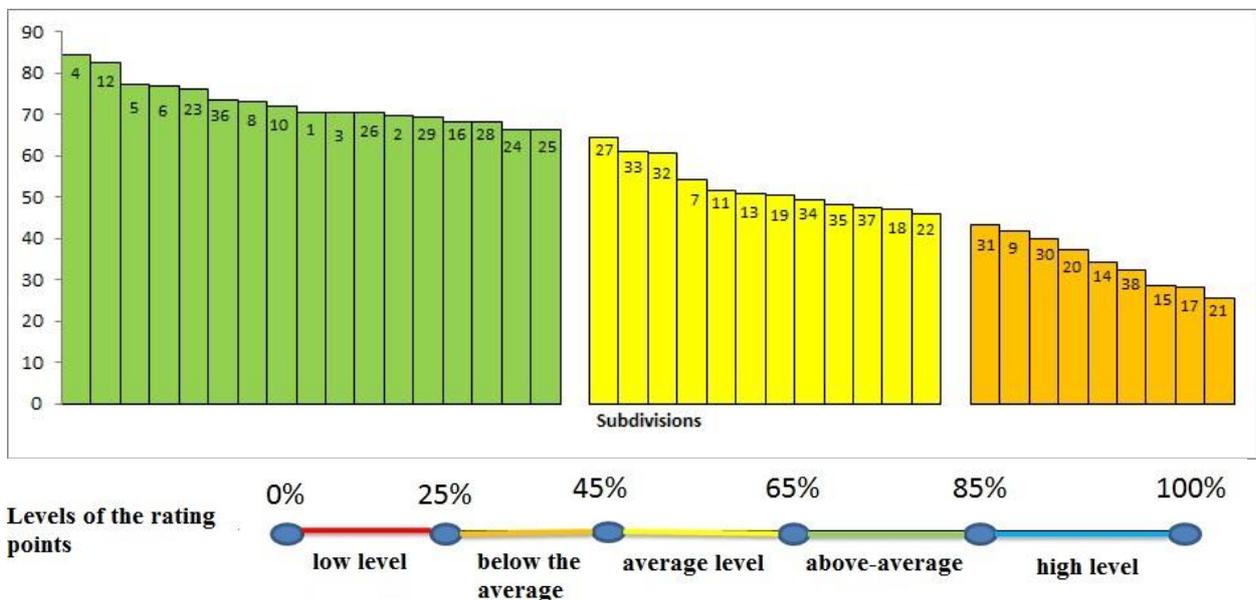


Figure 6: Rating of departmental heads by the manifestation level of professional interaction competence "Achieving goals".

Professional interaction competence "Achieving goals", refers to the quality of purpose performance and searching for resources to perform tasks, has received one of the

highest rating points (76,32% heads has received high and average values) (see figure 6). Revealed tendency indicates a high goal-oriented orientation of departmental heads, and in this regard, an important task is to direct potential on all-organizational efficiency.

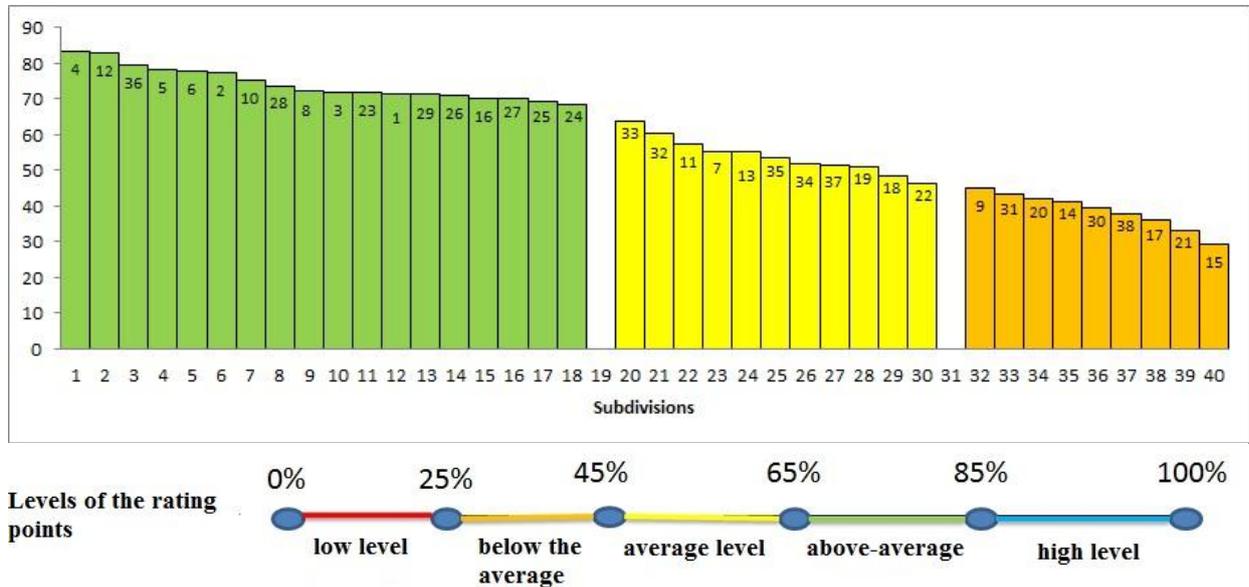


Figure 7: Rating of departmental heads by the manifestation level of professional interaction competence «Understanding and networking with colleagues".

Competence of professional interaction «Understanding and networking with colleagues" refers to constructibility in solving joint tasks: has received high ratings at 47,37% of heads of departments. (see fig. 7). The obtained results indicate constructive orientation of departmental heads in the solving tasks ensuring all-organizational efficiency of higher educational institution.

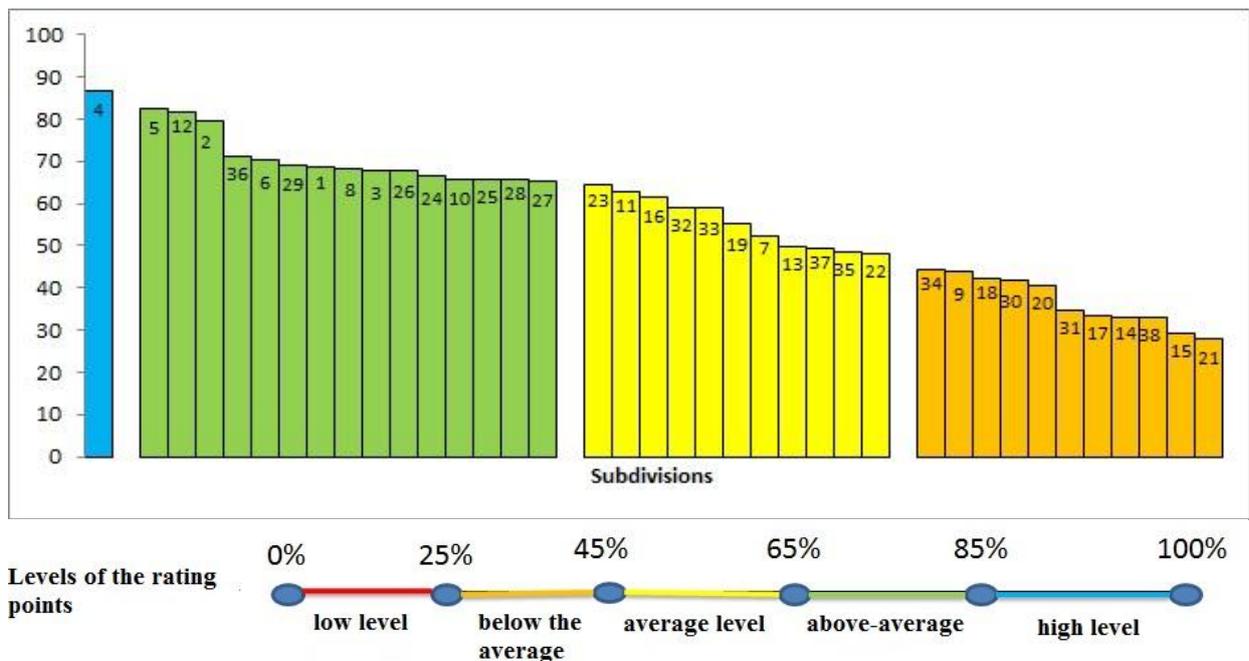


Figure 8: Rating of departmental heads by the manifestation level of professional interaction competence "Decision-making".

Professional interaction competence "Decision-making" refers to finding alternative solutions if the plan doesn't bring success, observance of sequence and decision-making terms, implementation of the decisions is presented by results tending to 71,05% of heads receiving high and average values (see figure 8). The marked tendency indicates high resultant orientation of developmental heads therefore attention should be paid to the tasks directed on increase of all-organizational efficiency of KSMU.

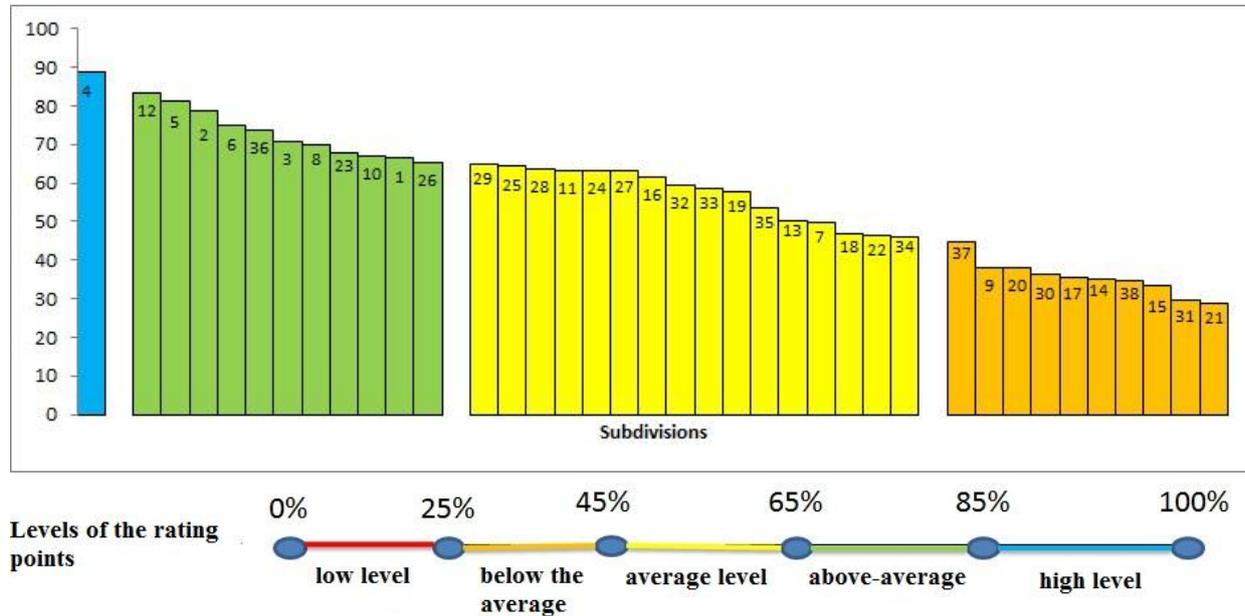


Figure 9: Rating of departmental heads by the manifestation level of professional interaction competence "Influence".

Professional interaction competence "Influence", deals with ability to convince the interlocutor using the logical argument, taking into account needs and employees motives of actions, is also characterized by high rating points at the majority of heads (73,68%).

The index of awareness is understood as knowledge of professional interaction competences of the structural divisions heads exhibited by assessment participants.

Criticality index – the indicator reflecting whether the head is critical in his evaluations. The reverse side of criticality (low criticality) – excessive loyalty or formality of estimation. This indicator is calculated as the ratio of quantity of low estimations of professional interaction competences intensity (1, 2, 3 points) to overall number of marks given by the head (on all competences of professional interaction within the structure) (see figure 10).

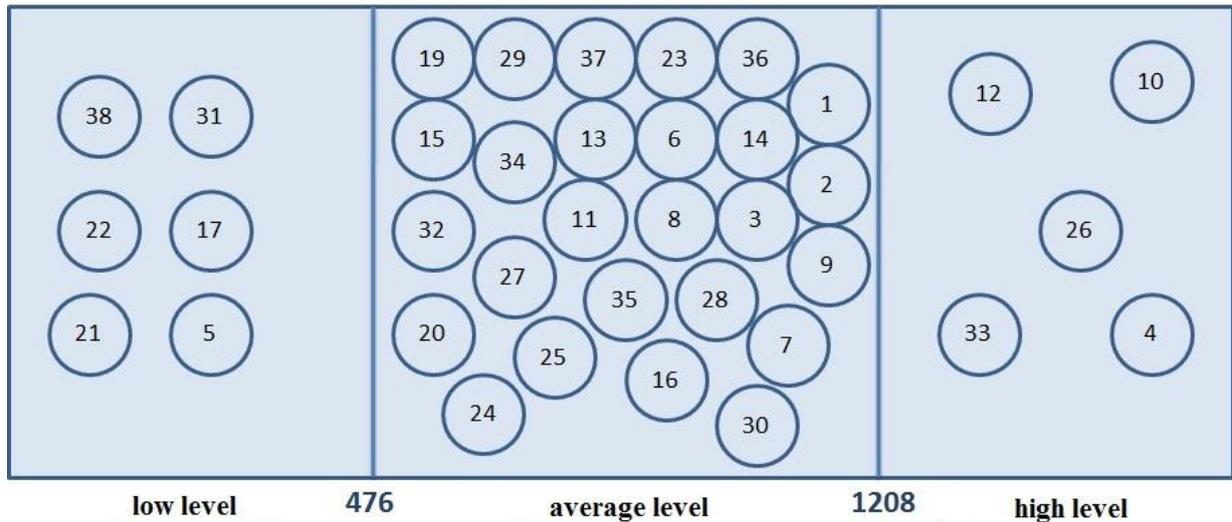


Figure 10: Awareness scale

Departmental heads with low awareness on competence-based opportunities of employees can't provide effective professional interaction. Departmental head having great number of performed functions has high level of awareness. Usually heads who are on the top of organizational hierarchy reveal high awareness.

Heads with low level of awareness and criticality are estimated as unmotivated to interact (see fig.10).

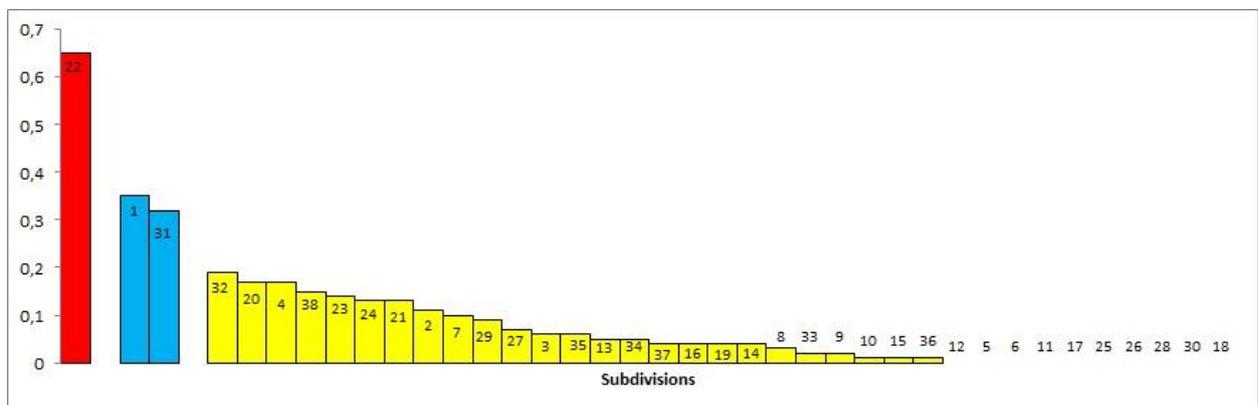
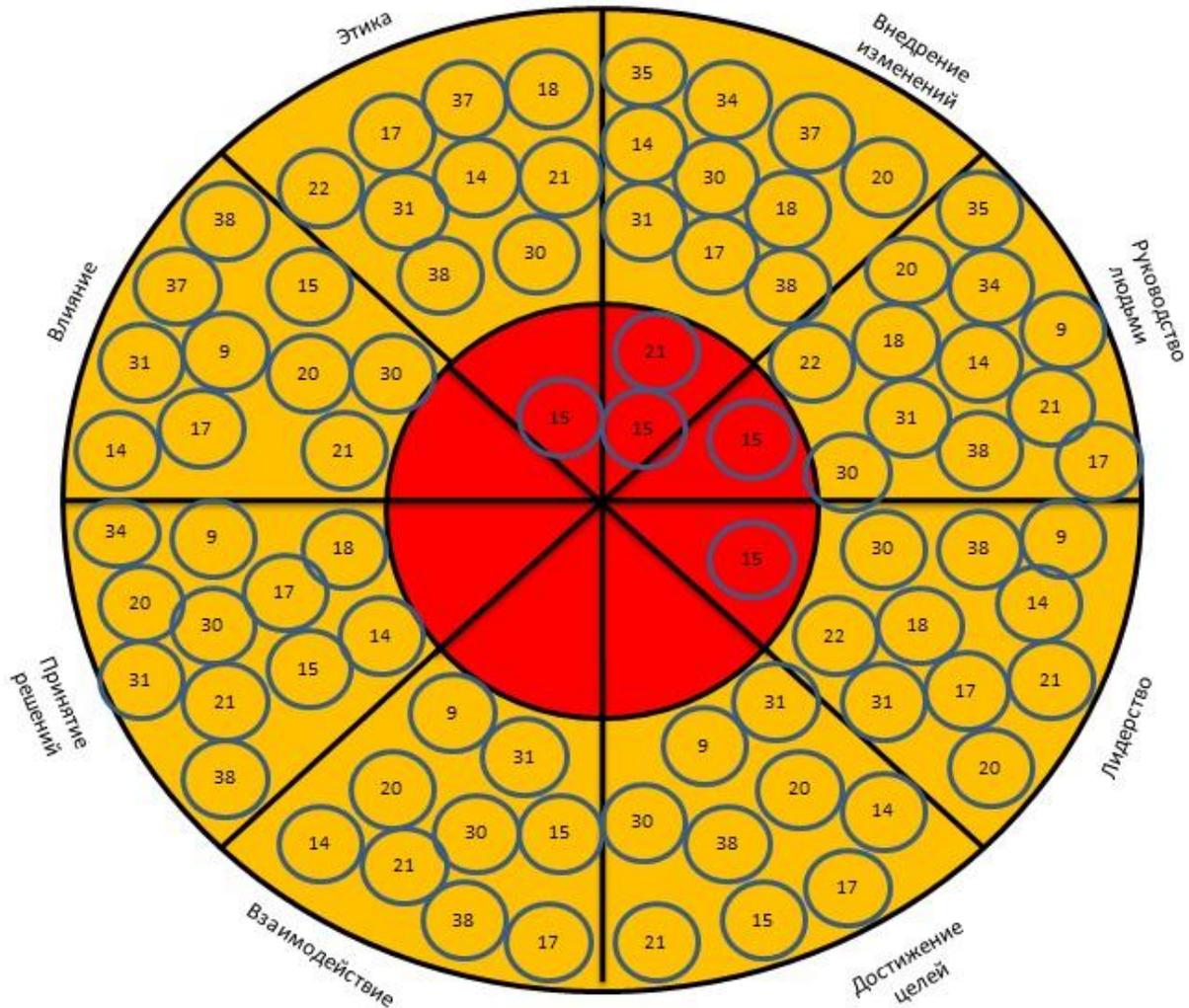


Figure 11: Criticality index

Low criticality is considered as excessive loyalty or formality of estimation. High criticality corresponds to the overall negativism in the interaction which correlates with the results of one's self-assessment and rating points by the competences.



**Figure 12: The assessment chart of interaction competences at departmental heads with low and very low rating points**

The departmental heads with high level of awareness and adequate level of criticality ensure corporate integration when competence-based resource corresponds to high and average rating point for five and more professional interaction competences.

Corporate integration is provided by 48,6% of heads when implementing the program of the competence-based assessment.

The overall loyalty and efficiency of professional interaction decrease when corporate integration of organization administrative board slows down.

Development of personnel potentiality in the higher education institution has to be focused not only on qualifying- substantial and pedagogical characteristics, but also include competences of organizational interaction.

Competence of teacher and employee of higher school is integrated according to the main qualifying, pedagogical, organizational content.



At the actual moment personnel strategy is oriented on development of personnel potential in qualifying-pedagogical direction, but organizational competence must be treated as a priority for near-term outlook.

The obtained results should be seen as reference point in the forming system to improve professional skills for organization administrative board.

#### **REFERENCES**

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