

RATIONALIZATION OF ORGANIZATIONAL STRUCTURE AT THE GRADUATE DEPARTMENT

Problem statement in general. Graduate departments are basic subdivisions of universities and main elements in its organizational structure. Most career guidance activity, organization and methodic providing of the academic process, scientific research performing and students' involving there, grant and agreements activity, scientific studies publishing, theoretical and practical training of students (including organization of practical study at the enterprises), assisting in graduates' employment and contacting with them, focus great attention on them according to attached majors. Besides, an academic staff of the graduate departments participates in work of Specialized Councils for theses defense, Scientific Council, Quality Council as guarantors of the educational programs etc.

Given the fact that there is a number of tasks, which are assigned for native graduate departments and also mostly limited resource base (personnel, financial, research, technical and technological etc.), we face the problem of scientific justification and choosing of their rational and organizational structure.

Analysis of recent studies and publications. Problems on personnel management at Higher Educational Institution (HEI) were studied by a number of native scientists. Particularly, Kratt O.A. defines conceptual approaches to the reforming of HEI management system [5]. Kaminsky B.A. studies theoretical and methodic fundamentals to improve HEI personnel management [4]; Lukyanets V.L. and Zotova O.M. regard a question to introduce informational systems into HEI personnel management [6]; Zagoriy A.M. studies the wage system problem, rating assessment of lecturers' professional activity and departments of university [2]; Bakulina N. investigates the essence and role of innovative technologies in the personnel management, which develop intellectual potential of HEI and region [1]; Pochtovuyk A.B. analyzes personnel's impact on HEI image formation [9].

The unsolved parts of the main problem. However, the problems to choose rational organizational management structures, moreover in terms of the graduate departments, have not been studied well enough. Round table "Organization of graduate department's activity under conditions of education integration" on September, 25, 2014 in Kyiv, was devoted to the mentioned issue. Therefore, approaches to improve organizational and functional interconnection between graduate departments, determination of peculiarities and investigation of methodic bases to form their effective organizational structures, have not been revealed yet.

The object of the article is to develop and to justify methodic fundamentals concerning rational organizational structure of the graduate department at university.

Main material presenting. Analysis and generalization of the native HEIs activity let to define main activities, performed by graduate department. These activities are grouped by types and are given below:

- **Organizational and methodic provision of the educational process:** elaboration and updating of curricula; elaboration and updating of disciplines, their methodic support (printed and electronic): working regularities, textbooks, tutorials, synopses, guidance, cases, slides etc.; processing, correcting and supporting of the distance learning courses, e-learning courses, examenarium; lectures, seminars, individual classes, consultations, supervision of obligatory home papers, course papers and graduation works, distance teaching, communications with students (informing, consulting etc.) via e-mail and other electronic connections; organization of students' traineeship, supervision of traineeship, traineeship reports acceptance etc.; training of students for participation in Olympiads;
- **Scientific activity:** search and submission of applications to the international, national grants; negotiations, forming and implementation of the economic agreements; initiative theme formation; scientific research performing within the framework of grant, economic agreement,

initiative theme, and within thesis paper (PhD, Dr of Science); supervision of PhD thesis papers and consultations of doctoral thesis papers; writing of reports on thesis papers and reviewing of scientific publications; organization and control of the students' scientific activity; students' training to the participation in national and international research papers contests; publishing activity (abstracts, articles, monographs etc.); participation in the scientific conferences of different level; execution of scientific research and scientific practical study in other organizations (national and foreign ones); organization and implementation of conferences scientific, including students' conferences; publication of scientific periodicals (collection of works, journals);

- **Career guidance activity**: meetings with future entrants (in colleges, schools, PTS, other HEIs) and with people, who impact entrants' choice concerning future HEI and major (lecturers, parents etc.); career guidance activity in social networks; support, publishing and spreading of the printed and electronic advertising materials; lessons, scientific circles at schools, colleges, PTS; organization of various competitions for future entrants; organization of acts directly at the enterprises and institutions to let entrants know their future profession; organization of meetings with graduates, who have achieved great success in their professional activity, with well-known specialists, interesting people; publications of materials about majors and professional activity, related to it, about students', lecturers' and graduates' achievements in the printed and electronic media; participation in round tables, programs on TV, forums, which let to demonstrate the advantages of profession, training at the concrete HEI and at the concrete department; organization of professional holiday, meetings with graduates, meetings of schoolchildren and students; establishing and supporting of contacts with public organizations, representation of department in them;

- **Activity with employers**: establishing and supporting of contacts with employers; involving of them to form curricula, formation of list and content of disciplines, to the educational process; organization of meetings between students, graduates and employers, assisting of graduates in employment; conducting of joint research; testing of the research results;

- **Organizational activity**: participation in meetings of the Special Council on thesis defense; participation in meetings of Scientific Council at HEI (of institute, of faculty); participation in the Quality Council; participation in different meetings at university (with Dean, on distance learning issues, on the career guidance activity etc.), and in university and faculty (institutional) events; conducting of activity by responsible persons in those fields, which are required by HEI administration or faculty (institute); work in the admission committee; participation in the work of Scientific and Methodical Commission The Ministry of Education and Science (MES) of Ukraine; participation in the work of Expert Board of MES Ukraine; organization and participation in jury work of students' scientific papers contests and students' Olympiads (of national and international levels); performance of duties of Head of Department, Deputy Head of Department, educational programs guarantor, Deputy Dean (Director) etc.; preparation of the licensed and accreditation cases, organization of MES Ukraine expert commissions' activity, which license (accredit) majors of the department;

- **Provision with paid service**: formation of the paid service list, provided by the department, creation of the proper organizational structures, development and coordination of their regulatory provision; search of consumers, formation and execution of contracts, their documentary support; formation of the clients' base;

- **International activity**: foreign scientific training or teaching abroad; international grant activity; searching of foreign partners and support of contacts with them; foreign specialists' involvement to the educational process, supervision of thesis papers; organization and supervision of students' international trainings; support of the programs "included semester", "double diploma"; career guidance activity abroad aimed at foreign students', post-graduates' and doctorates' involvement;

- **Promotion of the department and majors in Internet**: filling of content and site (sites) support of department; organization and conducting of work in groups in social networks; members' of

staff personal pages directing; presenting of lecturers' publications in repositories and other Internet-sources; teaching of educational and methodic materials on the Internet-resources etc.;

- **Publishing activity:** formation and making-up of scientific publications (materials of the conferences, monographs), their preparation to publishing; making-up of scientific journal; making-up of educational and methodic editions (textbooks, educational guidance, lectures, methodic guidance); making-up of reports of SRW, grants etc.; design development and preparation to publishing of advertising materials; design developing of department's publications (printed and electronic ones).

The list of task (not full) shows that personnel of the typical department, consisted of 10-15 persons, with traditional functional organizational structure of the management system will not able to perform them. The carried out analysis justifies that those works are spaced in time and if there is relevant plan-schedule, they will be really carried out. However, native HEI's activity realities and conditions under which it functions, understanding show that plan-schedule will have to be up-dated almost every day, but it is impossible.

In order to find ways to solve the problem, related to the choice of rational organizational structure to control graduate department's activity, traditional [7, 8] and modern [10] structures were analyzed, which are used in various spheres of human activity. According to results of analysis the decision was made to use project-matrix organizational structure in connection with "pulsatile" one [3]. According to it lecturers, workers and post-graduates of the departments, in addition to the main activity, choose projects (activities) which are interesting for them (see above their list). Projects have to be headed by those, who are mostly interested in them. Number of performers in the concrete project is being changed from time to time (accordingly, the team of the project is "pulsing"), depending on demands. For example, it is increased before the scientific conference start, or before another event performance. After finishing the project is stand-by. Participants always "migrate" between projects, depending on their interests and requirements of the project. In one project they are managers, in another they are performers, and in the other they are absent. Head of the Department carries out general coordination according to the strategic view.

Practical check of the suggested approach was performed at the Marketing and Management of Innovative Activity Department at Sumy State University (MMIA SSU), which teaches specialists in three majors: 076 "Entrepreneurship, commerce and exchange activity", specialization "Exchange activity" (Master Degree program); 073 "Management", specialization "Management of Innovative Activity" (Master Degree program); 075 "Marketing" (Bachelor and Master Degrees).

Formation of the organizational structure to control MMIA department activity is carried out in the following order.

1. Brainstorm method distinguished projects (works), which were mentioned and discussed several times at the meetings of department. Coordinators (responsible performers of projects) and possible participants of the project group were appointed there.

2. Some types of activity are distinguished, which all members of department: lecturers and post-graduates, have to carry out (table 1).

3. The scheme to distinguish workers of department by separate projects is developed (table 2). Concrete workers' surnames of the department are not mentioned in the table 2. There are only category and number (lecturer 1, post-graduate 4 etc.), and also functions which they perform in the project (part of the project activity, performed by them).

It should be noted that some activities require proper qualification and skills. Particularly: artistic decoration (design) of events and publications of the department; site or journal administration of the department. Such activities are performed by workers with special qualification and skills.

4. General scheme of organizational structure in activities (projects) management, fulfilled by MMIA Department is shown in the table 3.

Table 1 - Activities, performed by the whole department

Activities	Category of workers	
	Lecturers	Post-graduates
Organization and methodic activity		
Working regularities development and up-dating	From time to time, if it is necessary	-
Conducting of classes	According to the schedule, obligatory	Within the framework of the pedagogical practical training (seminars), obligatory
Development, correct and support of the distance learning courses, examinarium courses and others.	Always, obligatory	-
Communication with students via electronic means (e-mail, social networks)	Always, obligatory	-
Development of educational and methodic materials	Always, obligatory	As one wishes
Advanced training	According to the schedule	-
Scientific activity		
Scientific research performance within the framework of department's theme	Always, obligatory	Always, obligatory
Thesis research conduct	For the degree of Dr of Sciences (as one wishes according to schedule)	For the degree of PhD, obligatory
Writing of reports on theses and scientific publications reviewing	According to scientific interests and qualification degree	-
Supervision of students' research papers	Always, obligatory	As one wishes
Preparation of scientific publications	Always, obligatory	Always, obligatory
Participation in the scientific conferences	Obligatory, according to the schedule	Obligatory, according to the schedule
Training in other organizations abroad	As one wishes	As one wishes
Promotion of department and majors in Internet		
Personal pages	Always, obligatory	Always, obligatory
Placing of scientific and methodic publications to the SSU repository	Always, obligatory	Always, obligatory

Table 2 - Distinguish of the workers from department by projects (fragment)

Project (activities)	Workers							
	Lecturer 1	Lecturer 2	...	Lecturer 18	Lecturer 19	Post-graduate 1	...	Post-graduate 9
Development and updating of curricula	Guarantor of the program 076			Coordinator				
...
International activity	Coordinator							
...
Publishing of journal		Activity with authors			Coordinator			
...
Making-up of materials						Making-up of reports		Making-up of monographs

Table 3 - General activities, performed by department's staff

Workers	Part of general activities (table 1)	Part of activities by department projects (table 2)	
		As a main worker	As a busy worker for the present
Worker 1	Development of educational and methodic materials, preparation of the scientific publications...	Journal publishing, ...	Organization of the scientific conference, search of economic orders, ...
...
Worker 28	Theses research, personal pages control on department site, ...	Development of curricula, international activity, ...	Trainings with pupils ...

The mentioned above can be shown formally. Let us take several signs.

Set of works, performed by the whole staff (general activities):

$$A_{gen} = \{A_{gen1}, A_{gen2}, \dots, A_{genm}\}. \quad (1)$$

Set of projects, fulfilled by the department:

$$P = \{P_1, P_2, \dots, P_m\}. \quad (2)$$

Set of activities of i -project:

$$AP_i = \{AP_{i1}, AP_{i2}, \dots, AP_{ik}\}. \quad (3)$$

Set of workers from department:

$$W = \{W_1, W_2, \dots, W_s\}. \quad (4)$$

Then set of activities, assigned to i -worker, can be shown in the following way

$$A_w^i = A_{gen}^i \cup AP_o^i \cup AP_m^i, \quad (5)$$

where $A_{gen}^i \subset A_{gen}$ is a part of activities of i -worker to the extent of general activities; $AP_o^i \subset AP_\Sigma$ - part of activities of i -worker in the total amount of projects activities, fulfilled by him as by a constant performer; $AP_m^i \subset AP_\Sigma$ - part of activities of i -worker in the total amount of projects activities, fulfilled by him as by a temporary performer (if it is necessary, he is involved to the conference organization only in the process of participants' registration and during materials serving to participants).

Practice shows that the selected variant is rational and lets effectively to fulfill various activities. The effectiveness of this organizational structure variant justifies that department takes the second place in the rating of graduate departments of SSU the second consecutive year. The staff of department includes 19 Lecturers, 9 Post-graduates 2 Methodists. The list of main activities, performed by department, is presented in the table 4.

The staff of the department, participating in various projects, gets experience to carry out different scientific and educational activities. It increases its qualification, broadens minds, lets to develop and to realize its creative potential. Besides, some organizational culture is formed, which assists the staff cohesion, workers' efforts uniting to create favorable image and to provide development of the department. An active use of computer informational technologies and active work in Internet form web-culture [12], which is considered to be a constituent of the graduate department's organizational (corporative) culture (innovative) [11]). It defines specific activity in virtual space and is a significant competitive advantage in terms of the information economy creation.

Table 4 - Indexes of main activities, performed by MMIA department of SSU

Activities	Peculiarities and indexes
Academic process (development and up-dating of curricula, classes giving etc)	One Bachelor Degree and three Master Degree programs in 3 majors. Full-time, Extra-mural and distant learning. Examinarium, E-learning
Publishing of educational and methodical materials	During the department's existence (since 2002) its members of the staff published about 30 textbooks and manuals, over 100 підручників і навчальних посібників, біля 100 compendia of lectures and methodical guidance
Training of scientific personnel	Post-graduate study and doctoral study in 3 scientific majors
Scientific activity	State budget, economic contract, initiative, grant theme (native and foreign grants)
Publishing activity	Journal "Marketing and Management of Innovations", indexed in DB Web of Science, Index Copernicus and others (printed and electronic versions)
Career guidance activity	Contest "Find yourself in marketing", joint study with practice, giving of classes at school, colleges etc. Cooperation with employers, promotion of department in social networks, administration of site of the department
Publishing activity (scientific publications)	About 100 articles (including journals, indexed in Web of Science and Scopus), over 100 abstracts, several monographs (including those, which were published abroad) annually
International conference "Marketing of innovations and innovations in the marketing"	Every year after conference the conference proceedings collection and collective monograph are published
Participation in conferences out of SSU	Several dozens, including abroad
Academic mobility, training and teaching abroad	About 12-15 trips by members of the department staff annually
Training of students for participation in Ukrainian and International contests of students' research papers, Students' Olympiads, Contests of diploma projects etc.	About 10 victories annually
International academic mobility of students	The programs "Double diploma", "Included semester", trainings – annually
Thesis writing and defence	During the department's existence (since 2002) 3 doctor's theses and 27 PhD theses were defended

Conclusions and directions for further research. Summarizing the above material, one can make the following conclusions:

- Systematization of activities, performed by typical graduate department of the native HEI, is carried out in detail;

- The creative organizational structure of the graduate department is suggested based on systematic analysis of the literary sources and native HEI activity. It is a combination of project-matrix and "pulsate" structures, which let to carry out various activities. It is flexible and adaptive enough, gives an ability to focus resources on the most important projects, helps to form innovatively oriented corporative culture;

- Algorithm to form the suggested organizational structure of the graduate department at HEI, is proposed. Formal dependences are presented, which describe this mechanism by means of mathematic apparatus of set theory;

- Practical approbation (during several years) of the suggested organizational structure at the graduate MMIA department of Sumy State University is performed and proved the reasonability and efficiency of its use.

The received results are contributions to the education management development, particularly, methodic fundamentals of the graduate department's staff of the modern HEI. Further studies have to be oriented to investigate theoretical and methodical bases of the staff's organizational and functional interconnection optimization in line with its suggested organizational structure.

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