QUALITATIVE ANALYSIS OF SOME STRUCTURAL AND FUNCTIONAL ASPECTS OF THE ADMINISTRATING SYSTEM AT THE STATE UNIVERSITY OF NEW YORK AT BUFFALO¹

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Introduction. This paper presents some results of the research of fundamental principles essential for the construction and functioning of managing subsystems, which are connected with various directions of the managerial activity of the administration of the State University of New York at Buffalo (further UB), and which on the whole make up the UB System of Administrating (further SA).

The goals of the research considered below, the essence of the research issues and their topicality are determined by the following circumstances, which are in particular supported by the analysis of the dynamics of the changes in the UB administrative structure and management approaches within the last 15-20 years.

While creating and / or modifying a management system / subsystem the most rational methodology is the one which includes the stages of synthesis of the system in the following sequence:

1. The exact wording of the goals of creating the system (of the management goals);
2. Formulating the criteria of changing the degree of achieving the set goals;
3. Determining the general conceptual provisions and principles, the realization of which in the system will allow for the achievement of the set goals in the best possible way;
4. The concrete definition of the general conceptual provisions and principles as applied to the specific circumstances of creating the system, taking into account the peculiar qualities of the management object and the limitations set by them²;
5. Determining the mechanisms of the realization of the concretized conceptual provisions and principles and their practical incarnation in the system.

The methodology schematically presented above is idealized and is rarely realized in practice, although it is the realization of this scheme that leads to the best results and, therefore, it is necessary to strive for its utilization. The real experience shows that this scheme is realized in an iterative manner, i.e. there might be a necessity of the repeated recurrence and correction of the results of any of the named stages. Moreover, at the time of the first iterations or even of any iteration, some stages (of course, with the exception of the last one) may not be manifestly carried out. The latter is especially characteristic of stages 3 and 4. Let us note that the absence of the manifestly formulated and manifestly utilized results of the realization of stages 3, 4 according to the above-cited scheme while creating a management system / subsystem, does not mean that

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²For instance, in our case it is necessary to consider the UB structure (the structure of an educational institution) and the accepted standard organizational principles of management (the hierarchy of subordination, etc), the standard principles of the interaction between UB and SUNY (with the higher managerial structures) and other concrete data about the management object.
an ineffective system will be created. But the high efficiency of the system in such a case denotes that it corresponds to some general conceptual provisions and principles (stage 3 of the scheme) which are intuitively realized in it, but are not manifestly formulated, and which once again intuitively found a successful concrete definition for a concrete management object (stage 4 of the scheme).

The described circumstances show that in the analysis of functioning management systems / subsystems a very important and topical research task is to manifestly determine the results of fulfilling stages 3 and 4 of the above mentioned scheme. While analyzing the systems for which the conceptual provisions and principles at the basis of their construction have already been manifestly formulated, and for which the concrete definition of these provisions and principles for a specific management object has already been manifestly carried out, these provisions and principles are indispensable initial data for the repeated realization of stages 3, 4 (for examples, for the purpose of modification) or for the creation of a new management system / subsystem. While analyzing the systems which lack the manifest formulation of the results of the realization of stages 3, 4, the necessity of the preliminary exposure and of the subsequent research of the discussed formulations is topical for the same reasons. Let us note here that the indicated topical issues are especially typical of the tasks of managing organizational systems, including universities in particular. Let us denote the systems with the principles already determined in the sense described above through the symbol S1, and the systems with undetermined principles through the symbol S2.

The main goals of the research projects, the results of which are partially cited for the further considered directions of the management activity of the SA of UB, were:

1. For systems S1 - exposure and manifest formulation of the main general conceptual provisions / principles, which serve as a basis for the organization of the management process in the SA of UB in the examined directions;
2. For systems S1 - determination and manifest formulation of the conceptual provisions / principles which were concretized for the realization in the SA of UB and of the used mechanism of their realization in the examined directions;
3. For systems S2 - determination of the directions / of the research orientation for the exposure and manifest formulation of the conceptual and concretized principles which are realized in the system;
4. Qualitative (substantial) evaluation of the efficiency of the functioning of the SA of UB in the examined directions;
5. Critical analysis of the main general conceptual provisions / principles and analysis of their acceptability for utilization under other conditions (borders of acceptability);
6. Formulation of questions requiring additional research and discussion.

Only the following 3 directions are considered as the researched directions of the organization of the managerial activity of the SA of UB:

1. Managing the formation and realization of the UB budget;
2. Forming the student contingent and strategic planning;
3. Managing the utilization of computer and information technologies in the SA of UB.

The University at Buffalo. A Quick Orientation. Before we turn to the account of the main material, let us give some concise data about the object of administrative management considered here. This data
characterizes the object’s mission, structure, number of students, amount of financial turnover. 
UB is the largest public research university in the largest system of higher education in the US. UB’s main missions are teaching and research. UB includes about 26,000 students, about 1,300 full-time faculty, 177 undergraduate degree programs, 10 million square feet, 127 professional/graduate programs, 187 million research expenditures, 857 million annual operating budget. UB is a member of American Association of Universities (AAU). UB is the most comprehensive university in New York State and includes 13 Schools/Colleges, 9 full range professional programs: Medicine - MD, Law - JD/LLM, Pharmacy - Pharm D, Health Related Professions - DPT (Physical Therapy); Masters - Occupational - Therapy, Dental Medicine - DDS and post DDS specializations, Engineering, Management, Architecture, Informatics.

UB Budget Management. In this subsystem of UB administrating there exists a situation with manifestly formulated general principles and their concrete definition with regard to the realization in the concrete subsystem (for the concrete management object). The general conceptual idea underlying the manifest formulation of the general (and concretized) principles is the idea of decentralized management. With that the general principles and their adoption have a long history of their discussion.\textsuperscript{3}

Let us state the formulation of the general principles:

1. **Proximity principle.** The closer the point of an operating decision is to the point of implementation, the better the decision is likely to be.
2. **Proportionality principle.** The degree of decentralization should be proportional to an organization’s size and complexity.
3. **Knowledge principle.** Successful decentralization requires a centrally maintained management information system providing local central managers with timely and accurate performance reports.
4. **Functionality principle.** Authority and command over resources should be commensurate with responsibility and vice versa.
5. **Performance recognition principle.** A system of rewards and sanctions should be created to guide and motivate performance.
6. **Stability principle.** Good planning and performance are facilitated by stable environments.
7. **Community principle.** Relationships of the parts to the whole and to one another have to be explicitly reflected in the assignment of responsibility and authority and in the allocation of resources.
8. **Leverage principle.** The legitimacy of both institutional and local responsibilities has to be recognized. Central management must achieve institutional goals, maintain balance, respond to initiatives, determine level of central services.
9. **Direction principle.** The existence of a mutually supportive academic and administrative plan for the institution is assumed.


Notes and handouts at USB conference held in November 1992.

It is of interest to follow the dynamics of the changes in the approach to the management of financial resources. In 1986 the State University of New York (SUNY) legislation provides UB the opportunity to decentralized authority and responsibility to reallocate between Temporary Service and Other Than Personal Service. In 1992 budgetary authority and responsibility for Personal Service Regular is decentralized to the Provost and Vice Presidents and the Guidelines for the Decentralized Management and Control of Personal Service Regular Funds are issued. In the same year the responsibility for position control is delegated to SUNY at Buffalo in increased flexibility in establishing FTE (Fund Tuition and Endowment) levels. In 1993 the Guidelines for Budget and Expenditure Transfers are issued to assist administrators in maximizing available resources, as well as to enhance management flexibility. In 1994 the University’s central information financial system BURS (Buffalo Administrative Resource System) is modified to facilitate fiscal budgeting and the Introduction to Fiscal Budgeting is issued. In 1999 the revenue sharing budget system is implemented. From 1986 up to the present time UB shifts away from dependence on the State Appropriated Operating Budget for unit operating revenues and toward an “all funds” environment, which provides greater flexibility and increased responsibility. There have also been significant changes in the manner in which the Research Foundation (RF) manages its resources. In 1989 the RF decentralizes authority and responsibility for budgeting, contract and grant administration, purchasing, personnel, payroll, technology transfer and funds management to the University centers.

Now let us cite the concrete definition of the general conceptual principles of financial management utilized at UB:

1. The University has adapted a decentralized, all-funds approach to the financial management of the institution.
2. Responsibility for financial management has been delegated by the President to the Provost, Vice Presidents and Vice Provosts who have the authority to further delegate responsibility to other individuals in their organization such as Deans, Associate Vice Provosts, Associate Vice Presidents, Directors and Project Directors (financial administrators). These financial administrators are responsible for the financial management of their organizations, grants/contracts and accounts.
3. Allocation adjustments, positive and negative, and savings requirements are distributed at the Provost / Vice Presidential level. Further distribution of allocation adjustments and savings requirements may be made in each area.
4. Within a fiscal year, individual IFR (income fund reimbursable), DIFR (dormitory IFR), RF, UBF (UB Foundation), FSA (Faculty Student Association) and CP (Clinical Practice) accounts, must be in a balanced condition within each fund. For state Operating funds, the balanced condition will be determined at the financial responsibility level (i.e. Dean / Associate Vice President level). Over-expenditures are prohibited. Any temporary over-expenditure authorization would require the approval of the Senior Vice President based on the recommendation of the Vice President or Provost.

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4Web site UB Business Homepage, University at Buffalo, 2000.

5At present the BURS system is being modified into a new system named UBB (the University at Buffalo Budget system).
5. The restrictions regarding transfers of allocation, revenue and expenditures between/within all the fund sources must be met.
6. BURS Financial, RF Online, UB General Ledger, the UBF, FSA and the clinical practice accounting system(s) are the records used to measure compliance with these financial management principles.
7. The University subscribes to the use of NACUBO (National Association of College and Universities Business Officers) classification for recording allocations and expenditures in order to facilitate comparisons to other institutions and for indirect cost recovery proposals.
8. Internal control procedures related to collecting, recording and depositing of cash must be followed.
9. University policies and procedures regarding fees, fines, deposits and other charges must be followed.
10. Budgeting and spending for all endowment fund income must be consistent with the terms for income use stated in the applicable deeds of gift.
11. The University Controller in conjunction with the UBF Executive Director, the FSA Executive Director and Health Affairs’ Chief Operations Officer will monitor financial activity and take action when the above principles are not followed. Transactions may be frozen until corrective action is taken.
12. These principles will be reviewed and modified as deemed appropriate, annually.

Principles 1 through 12 also contain the organizational solutions of their realization.

On the whole the given principles reflect the positive experience of the realization of the general conceptual provisions 1 through 9 of the decentralized management of the financial resources at universities. Their positivity is supported by the current financial stability at UB, by the successes of UB in the realization of the strategic development plans and other data in [4]. However, let us make here some critical remarks of the given principles. In our opinion, they do not consider fully enough the mechanisms of lowering the risk, connected with the fluctuations (indeterminacy) of the demand for educational services. The ways of insurance against the indicated risk, stipulated in the mechanisms of the realization of the principles (supporting and regulating the units’ budget at the expense of higher responsibility in case of the deviation from the financial revenues expected by them), do not take into full consideration the prognosticated data and do not use the risk measurements. This may not be enough in case of the unstable demand in the market of educational services.

Managing the Quality of the Student Preparation. In this subsystem of UB there exists a situation when the manifestly formulated general principles and their concrete definition with regard to the realization in the concrete subsystem (for the concrete management object) are absent. In this given case the analysis of the mechanisms used in the SA of UB for managing the given activity area is necessary for the formulation of these principles.

The analysis of the mechanisms of the realization of the management in this field shows that these mechanisms are based on the conceptual principle called the systematic approach, the essence of which is in the fact that any block (element) of management should not be considered in an isolated manner. While defining the mechanisms of managing the block it is necessary to take into consideration its interconnections...
with other blocks of the system\textsuperscript{6} to such an extent, as they influence the achievement of the goals of managing the specified block. Such a procedure leads to the presentation of the management object and correspondingly the direction of the managerial influences in the form of a hierarchical structure. The presentation of such hierarchical structure of the subsystem under consideration, and its analysis together with the mechanisms of managing the quality of the student preparation utilized at UB, determine the direction (orientation) of the research with the goal of formulating the conceptual and concretized principles, underlying the given administrating subsystem.

Let us cite some key points, characterizing the functioning of the subsystem under consideration and the organizational decisions in managing the given area. Organizationally managing the quality of the student preparation at UB is one of the activity directions of the division Vice Provost for Enrollment and Planning. The following are the key mechanisms of management: (1) - measuring the degree of the student preparation (including freshmen); (2) - dividing the students (in each year of instruction and in each specialization) into level groups according to the measured degrees of preparation; (3) - adaptation of educational programs to the level of the divided groups and their utilization for instructing the students of each level. In order to emphasize that the realization of the mechanisms (1) - (3) requires a systematic approach, let us point out that for their realization it is necessary to fulfill the management of enrollment, preparation and adaptation of educational courses, of the staff and faculty (human resources), of the laboratory basis of preparation (the basis of practice), etc.

The positive effect of the managerial activity of the SA of UB in the field of managing the quality of student preparation is reflected in the dynamics of the change in the amount of students at UB on the whole and the quantitative composition of the groups of each level. Within the time period starting with the year of 1998, critical for UB in the given indices, till the year of 2002, there has been a substantial growth of the amount of the enrolled students, some changes in the numbers of students in the lower level of preparation, and the growth of the numbers of students in the higher levels of preparation, i.e. there is a transition from one level into another through the heightening of the levels of preparation.\textsuperscript{7}

As a remark about the utilized mechanisms of management in the SA of UB activity field under consideration, let us note that these mechanisms do not reflect the ways of registering the resource limitations on the possibilities of managing the quality according to the scheme used at UB.

**Managing the Utilization of Information Technologies (IT) in the SA of UB.** The level of using computer information technologies in educational and managerial activities places UB at the very top of the list among the establishments of higher education, UB’s rating in this field is 10/11 place. A significant role in such rating of UB is played by the organization of the management of utilizing IT in SA of UB and of developing the processes of using IT.

Historically the formation of the system of managing the IT utilization in the administrative activity was not

\textsuperscript{6}In this case the system is UB and SUNY taken together.

\textsuperscript{7}See the report of the Vice Provost Office for Enrollment and Planning, Web site UB Homepage.
based on the formulation and concrete definition of the fundamental principles. However, the analysis of the organizational structure of the system presently functioning in the field under consideration, shows that the principle of reflecting the UB structure in its system is realized in it. Generalized organization structure of the system under consideration includes Chief Information Officer (CIO) - Vice President, Vice Provost for Educational Technology (in his office), CIO Administrative Office, Chiefs of IT Units, Non-Academic Units, Libraries, Academic Nodes.

Let us note, that the structure and mechanisms of functioning of the system of managing the utilization of IT in the SA of UB require ideally the presence in each structural block of the system of managing the specialists not just in the field of information technologies, but also the specialists in the field of the activity of the corresponding division (financial, or enrollment, or recruitment, etc.). It is rather difficult to say without additional research if this will be an advantage or disadvantage while using this UB approach in managing IT in other educational establishments with a different organizational structure.

**Conclusion.** In conclusion, let us formulate several problematic questions regarding the principles of management, utilized in the SA of UB in the areas considered above. In the field of managing the formation and realization of the UB budget, let us single out the following provisions for additional research and discussion:

1. How precise is the correspondence between the realized (concretized) principles of budget management in the SA of UB and the first and second general conceptual principles? What qualitative index of the rationality of the degree of such correspondence can be used?
2. What characteristics of the market of educational services (demand for educational services) make the mechanisms of lowering the financial risk utilized in the SA of UB sufficient? What additional mechanisms of lowering the financial risk are expedient to be stipulated?

In the field of managing the quality of the student preparation let us single out the following provisions:

3. In what way can the general principles, reflecting the systematic approach to the given management area, be formulated?
4. What can the mechanisms of registering the resource limitations on the possibilities of managing the quality in the scheme utilized at UB, be like?

And finally, in the field of managing the utilization of computer and information technologies, let us single out as such a provision the following:

5. What is the degree in which the organizational structure of a managerial office (in any subsystem, e.g. in the subsystem of the higher level - Chief Information Officer (CIO) - Vice President) should reflect the structure of the systems of the computer and information provision of the areas of the activity of UB/(educational establishment)?