



REVUE

GESTION 2000

- *L'internationalisation des entreprises : théories et approches explicatives. Application au secteur de la distribution.*
- *Regards croisés sur le capital intellectuel : application à une entreprise de biotechnologie.*
- *Observer, comprendre et expérimenter : l'étude des organisations à travers la simulation informatique.*
- *Nature de propriété et divulgation volontaire des informations dans les entreprises tunisiennes cotées.*
- *Multinationales et Transition : une analyse de l'impact des multinationales sur la transition des entreprises hongroises.*
- *La conception stratégique des projets de E-administration locale.*
- *Pour une démarche marketing dans une procédure de recrutement. Application à l'analyse des critères de choix professionnel.*
- *Topical Questions on Managing a Higher Educational Institution in the Context of Using Informational Technologies.*
- *Le rôle de la tradition orale et de la confiance dans l'apprentissage organisationnel en PME.*
- *ICT acceptance : The case of CRM project.*



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## Topical Questions on Managing a Higher Educational Institution in the Context of Using Informational Technologies

*With the advent of the modern industry of manufacturing informational technologies means the role of information as the basic source of weighed decision-making tends to a steady growth. Such situation is characterized by not only the jumping volume of information, but, what is more important, by its availability and the speed of access to it. However such rapid growth is inadequate to the quality of information and readiness of users to accept the necessary business information in time.*

The manager of any level realizes, that the decline in risks at decision-making directly depends on volume and quality of the necessary information, which the business-processes accompanying such decision processes, cannot exist in a separation from the business information itself.

Moreover, information management is the basic function of leaders of different levels. Thus two main components of this process are, on the one hand, reception of the authentic and actual information, and with another, transfer of its necessary parts to employees. Today it is safely possible to assert that the control systems based on use of information-communication technolo-

gies allow to provide the accelerated access to the necessary information, to systematize basic data, to organize any reports on them. However euphoria from presence of such systems would quickly disappear, if the higher educational institutions at the beginning stage don't define, which kinds of information they want to receive, as well as priority directions of its use.

Moreover, the University should not expect staff reduction after the beginning of computer system operation. The effect from introduction of such systems lies in completely other plane, namely in the field of increase of management efficiency.

## Basic problems connected with functioning of business information in a higher educational institution

In the beginning we will address to the basic definitions connected to the text of the present article. For today there is a set of information definitions. We won't list them, but we shall pay attention that basically under the term "information" people mean facts, data, news and knowledge. Thus they allocate the following three components: data, information and knowledge on the basis of the typological attribute which is taking into account the degree of perception by a person.

And if the data concern to the contemplated phenomena in this context they are completely independent from our consciousness. Information actually is the interpretive data. It is based on sensual perception, and in this sense can deform the data laying in its basis. The knowledge is the highest form of demonstration of information and data perception as it is active inherently and is formed not only on the basis of perception, but also on the basis of analysis and conclusions. And in this sense the knowledge can not always display real data or, we shall tell more precisely, the data which we did not contemplate (Connell, 1983).

Thus, the information is integral structural unit of knowledge, and though it is possible to receive knowledge intuitively as well, further we consider the knowledge received on the basis of perception, analysis and conclusions.

In the context told above, the business-information as a special kind of information, connected with managing influences, should give the University management a basis of knowledge both about the internal structure of work of their institution (specialities, contingent, the list of staff, personnel, budgeting, etc.) and about the external one, in which there is the higher educational institution itself (the state order, the situation on the labour market, average wages in the industries, tariffs for municipal services, the state tax policy, etc.).

At that the basic purpose of gathering of the information is, that on its basis (most fully and precisely as it's possible, minimizing the level of uncertainty) to form knowledge and to make duty decisions. Thus, at reception of the business-information the accent should be made on gathering of the facts, which are real and adequate to the situation. Such accent will allow to reduce quantity of the unnecessary information and as consequence, to make decisions duty and adequate to situations. However such way is dangerous enough, as the information once concerned to be irrelevant, then

can play the main role in the survival of the University. The classical acknowledgement of this is the fact of speeded-up growth of the wage fund in structure of secondary school from 2001 up to 2004. And if in 2001 its proportion made approximately 30%, in 2004 in a number of high schools it has reached the level of 70%. The higher educational institutions which in due time have not taken into account this factor, appeared on the verge of bankruptcy.

The other example is connected with transition to 12-years system of education at which in 2012 the secondary school will not give graduates. Without having taken into account this information in due time, a University is possible to appear, for example, in a very complex situation with formation of the staff list. Therefore the work connected to formation of the register of "the necessary information", is rather uneasy and demands special attention.

The other problem laying in completely other plane, is connected to strongly pronounced subjective character of University management, at which, despite the deterministic economic paradigm, decisions are accepted on the basis of personal impressions, own previous experience of the rector and those or other heard or seen examples. The big personal experience of the author speaks that leaders of different level of a higher educational institution

have the big trust to "intuition" and "internal voice". Thus, rather frequently there is a discrepancy between the business-information which is factual, and business knowledge which is frequently based on intuition.

Thus it is very important to realize, that the time of voluntaristic decisions based on "internal voice", comes to an end. And it is first of all connected to reduction of an opportunity of rectors maneuver within the framework of amplification of the state regulator policies in the field of education and sciences. It concerns all aspects of activity of a University, starting from questions of licensing and accreditation, organization of educational process, formation of contingent and finishing with questions of formation of the staff list. There, where there is a reduction of backlash for the administrative decision, the transition to decisions based on deterministic economic conception is necessary.

## Kinds of business information of a higher educational institution

Rather frequently business-information is classified according to one of below-mentioned ways. The first way is connected with a position of the information source location and, hence, internal and external sources are singled out. The second way classifies the information on its applicability. The

last way in our statement will be the basic, even because finally the information is collected for realization of a specific goal. Thus, for the considered below standard categories typological attributes act : first, the source location and, second, destination (Blair & Gordon, 1991).

## Internal information

### State order

It is one of system forming questions of functioning of a higher educational institution. This question is especially important for state universities. Though there are a lot of examples of quite big share of state order at private universities as well. Such order provides stability of vital ability of an educational institution and allows enough predicted ability to form a nucleus of the staff list. However in present economic conditions the Ukrainian universities need to constantly derive own formula of balance between volume of the state order and quantity of contract students. And, if to take in comparison the middle of 90ies of the last century and present time, it is possible to notice the tendency of evident increase in budgetary places. It is possible to assume safely, that as soon as the state will start to finance all items of the University budget, and not just the salary with taxes and the scholarship in the volumes directly connected to a

contingent and according to the Resolutions, higher educational institutions will sharply change the policy connected with admission of contract students. The fact of sharp reduction of their number in a contingent on the one hand, and fierce struggle for increase in the state order, on the other, and as consequence, growth of influence of the state on priorities of an education system as a whole, will become obvious. It is important to remember also, that today there are quite transparent mechanisms of state order formation, based on tender procedures and studying of labour market on the basis of the given regional centers of employment.

In general, the now existing system (in Ukraine and may be in Post Soviet Union countries) of self-order and self-distribution, and we speak about such branch as education, from the classical point of view cannot be effective. If to add to this voluntarism of redistribution of the received state order inside the higher educational institution, the picture on graduation from educational institutions forces to speak about over-production of one and sharp shortage of other experts constantly. For example, today at schools there is a catastrophic shortage of mathematics and computer science teachers and together with it inside pedagogical high schools reduction of budgetary places on this speciality is observed.

## Demographic situation

This question can be considered from two positions. First, from the point of view of admission of new students, and as consequence of formation of the competitive environment of entrants. Second, from the point of view of the future need for corresponding experts. For example, reduction of a contingent at schools draws attention to the question on need of the certain quantity of teachers of the certain major field. In general, the account of a demographic factor allows to plan more precisely structure of the staff list, and as consequence, to minimize the cost price of training, especially in the context of sharp increase in wages.

## Carrying out reforms in the educational system

The account of this factor is of great importance in making strategic decisions of development of a higher educational institution. Today the system of higher education of Ukraine is standing on a threshold of entering the Bologna agreement. It's not simply a replacement of one concept with others. Any attempts of officials to change with formal aspects substantial ones will not result. Real changes will affect radical structure of functioning of a higher educational institution, having realized a major principle "University

is a corporation for service of a student's interests". Only behind this paradigm it is possible to really realize a principle "science, and educational process after it", a principle of "mobility", a principle of international communications priority, a principle of "credit-modular system".

At present "scholastic" system of the organization of educational process, the high schools which in due time have not reacted to this tendency, can not just appear on the bottom steps of coming independent, public rating system of assessment of Universities, but also be absorbed by "neighbours". It is obvious, that the higher educational institutions which are not possessing modern information-analytical systems, with the big work can cope with the necessary transformations adequate to the new social order. The second scale project of reforming of system of secondary education is connected with transition to 12-years school. High schools can already feel all force of consequences of this reform in 7 years. Absence of graduation from schools will lead to corresponding absence of the first year students and, as consequence, to constant absence of one year during the subsequent 5 years. If to be frank it is difficult to name even one high school of Ukraine having the precise, proved enough plan, editing ability to live during this period.

## Information about competitors

Here it is necessary to allocate local competitors, and also prestigious central high schools of Ukraine. Influence of these and others is significant, especially in the context of constantly decreasing entrants contingent. It is necessary to have the full information, as the information based on hearings, can lead to the decisions having fatal consequences. For example, fears, that the entrant will not come, as "they say, that there is cheaper", can lead to the decision to unreasonably lower the cost on competing specialities, as consequence, having badly provided in the cost price such component, as the salary. Actually, reduction of quantity of entrants is connected not with the big cost, and simply with deterioration of the demographic situation. There is a rating of Western universities, defined on the base of objective matrix. And the informal rating of the high school speciality is completely adequate to the cost. And the main thing, the entrant is ready to pay the corresponding price

Generally speaking, the factor of presence of the competing environment should define the purposeful work connected to gathering certain information, its processing and representation, convenient for perception of a high school management. We speak, first of all, about such parameters, as the nomenclature of specialities, contin-

gent, personnel structure, level of accreditation of specialities, fee for contract students, presence of places in dormitories, computer base, international communications, etc. Presence of such structured information allows to make the weighed decisions concerning opening new specialities, definitions of a price policy, staff formation etc. It is obvious, that for structurization of actual information about competitors it is necessary to possess modern information-analytical system and specially prepared small staff, able to carry out corresponding work. The careful preliminary work, allowing to define parameters of such business-information is required.

## Macroeconomical and geopolitical information

This kind of information, first of all, is important for definition of development strategy of high school. Knowledge concerning a macroeconomic situation in the country allows to define, in particular, the nomenclature of the specialities really necessary for a society, to bring necessary corrective amendments in curricula, more precisely to carry out a price policy of formation of the fee, corresponding to opportunities of the state and citizens, to carry out an adequate policy on admission of foreign students, etc. And again, gathering of the concrete information, its selection and representation in a form convenient for perception, constant

updating, conducting the comparative analysis forces to speak about necessity of use of the integrated computer systems of decision-making support.

Information about possible infrastructure of entrants admission

Is one of basic questions of forming of students' contingent. The account of a real situation in areas, construction of necessary mutual relations with their management, and also the management of regional colleges or schools with high rating, knowledge of a situation in regions will allow to solve a problem of an effective admission. It's important however to understand, that manual management of this question is possible, but the predicted management is possible only on the basis of use of the special computer systems integrated in informational-analytical system of higher educational institution.

External financial information

To especially large universities having a plenty of branches including foreign ones, possessing the ramified social infrastructure, it is very important to possess well structured and, the main thing, actual information concerning dynamics of exchange rates, changes in tariff system of municipal payments, average tuition fee at similar universities abroad, tendencies on internal and world labour markets, etc. It's very

difficult to collect and structure the information of such type. Though it is capable to help to Ukrainian high schools to define modern lines of own development, and as consequence, to have a quite good rating in world educational system. Presence of such system of monitoring will allow to react and predict any financial changes adequately.

The information on regulation and the taxation

One of most pressing questions of functioning of the Ukrainian higher educational institutions. As to regulation the absence of real autonomy of universities for today has led to serious centralization of management of higher education system. Everything, starting from the student's card and up to reception of the diploma, from a rigid regulation of the organization of educational process up to definition of terms of dismissal and admission, from quantity of hours on this or that block of the curriculum up to quantity of hours of auditorium weeks, and, at last, the absence of real elections of the rector, all this is the serious terminator of decision-making. Though here it is necessary to tell, that many rectors, complaining about the absence of real autonomy should understand, that the autonomy of University is not the autonomy of the rector, that acceptance of the acts bearing real independence to high schools, will be



rigidly adhered to change of universities statutes where the norm of one or maximum two terms of electivity for the head becomes their integral component. It is impossible to allow for independent high schools to be without restriction, and legislative (without exceptions) powers of their first persons.

Otherwise the virus of "clans" becomes an integral part of a high school life. In this situation, many administrative decisions will be accepted not on the basis of deterministic economic paradigm, but by a principle "by all means to be kept in to be kept in the armchair" or subject to this or that political or social situation. Unfortunately, such decision-making is carried out at a level of the country parliament as well. For example, the Law on the higher education, having direct action, two years ago has forbidden changing the tuition fee during the whole term of education.

At this time, during these two years the wages in educational branch have grown in 2 times. But she is one of the major components of the University budget. How to resolve this contradiction? How to plan management of high school, not to turn out to be the bankrupt? In our opinion, it is necessary for a management to have modern information toolkit of making of the weighed decisions. People can object. It does not depend on the rector. It is

the Law. No and no again. There are always internal resources, which are necessary for starting in the due time to minimize voluntaristic legislative decisions. Which ones? It is a problem of separate research and the author has concrete answers. As to the second question here it is necessary to note inconsistency of tax privileges in the education system. On the one hand, all high schools which are carrying out transactions within the framework of authorized activity are released from the surtax and the profit tax. On the other hand, at purchase of the necessary equipment and materials, carrying out of repair work, etc. universities pay the surtax to contractors and suppliers, not having mechanisms of his compensation. Where is a privilege? Therefore at carrying out or planning of own financial and economic activity educational institutions should trace precisely changes in the tax laws and in the due time to bring corrective amendments. The last, classical example of inconsistency of the tax system is underfinancing of the item "wage tax", in connection with that in 2004 the privilege on "sanitary" charges has been cancelled, but the financing of "sanitary" was lead. It is important to note, that already today there are separate powerful components supporting decision-making within the framework of the problem. The example can be the computer system "Law League", the highest versions of which is supported distantly via the Internet.

## Internal information

### The admission information

Is one of the major parameters of high school stability, correctness of the chosen priorities, entering of corrective amendments in carrying out professional orientation work, updating of specialities nomenclature, strategy of personnel changes, etc. The presence of trustworthy information in the context of change on years will allow the management of high school to carry out the balanced predicted policy, constantly reducing the tuition fee. The presence of corporate information-analytical system will allow to include heads of all levels of University in this process, and as consequence, to make adequate not forcible decisions.

### Information on organization of educational process

For today the majority of Ukrainian high schools have the traditional form of educational process organization, leaving roots in the Soviet time. There are many parameters determining this system. It is possible to refer to them on the top : the curricula, schedule of classes, staff list, staff, contingent, relation of professorial to educational-auxiliary and to administrative personnel; on the bottom - teaching load of the faculty, hourly fund, quantity of rates, relation of the faculty to the resulted contingent on each speciality, quantity

of groups and subgroups, the admission of academic groups, etc. At the present stage the majority of high schools collect, store and process these data manually. If to take into account, that the decision of such problems as the salary and its delivery, the scholarship and its delivery, tuition fee and its reception on the University settlement account etc. depend on the mentioned above information, it is easily to come to a conclusion, that the use of the corporate integrated computer systems of support of the processes regulating streams of specified business-information, is extremely necessary for functioning of modern high school. Thus it is important to remember, that on such data set there is a set of reports necessary not only for supervising or higher organizations, but, the main thing, for the University management for making modern and actual decisions.

### Staff information

We have specially allocated this type of information into separate item by virtue of his importance. It is necessary to remember, that the University is not a school, and the importance of University is defined not only by its technologies and environment, but also by carriers of knowledge. In many cases the qualitative structure of the faculty unequivocally defines the face of a higher educational institution. Therefore possession of the actual information about the correlation of

quantity of students to the Pedagogical Program Environments (PPEs) on each speciality, about qualitative structure of such correlation to average loading of PPEs on each speciality, dynamics of their changes, PPE wage fund in the light of each speciality and about dynamics of its change, etc. will allow the management to react operatively to various sorts of disbalancement, available or outlined.

#### Internal financial information

This category of information describes the basic accounting information on a high school balance, the relation of wages to the gross revenue, the ratio between the general and special funds, base parameters of the list of staff, average tuition fee, the ratio of budgetary and contract students, etc. Thus the universities having own self-supporting divisions, should trace attentively the similar information, and also have the corresponding summary business-information on them. Such information gives an opportunity to have a complete picture of well-being of University and prospects of its development. It is obvious, that such huge spectrum of the information and set of reports above it demands the use of modern information toolkit. Moreover, a number of major financial parameters should be coordinated with the Ministry of Education and Sciences of Ukraine (for example, the list of staff of a high school, and within the frame-

work of two funds – the general and special, and also estimates for one fiscal year which, by the way, does not coincide with one educational year). It demands making carefully worked decisions based on deterministic economic paradigm (Fuller & Jenkins, 1995).

The internal information necessary for giving outside

Generally speaking, it is possible not to consider this kind of information. But today, during the epoch of unprecedented development of modern telecommunication means, and first of the entire Internet, consideration of this question becomes rather actual. So has developed historically, that many high schools continue to consider significant and very important information to be closed. Moreover, a number of leaders take special measures which are not allowing not only publishing it, but even not to have access to it by those who by virtue of functional duties, should possess it. First of all the question is the state order on each speciality. Closeness of information allows manipulating with it and solving questions of redistribution of the state places not in interests of high school, but in own. Such approach bends real interests of a University, the information about it, forms inadequate representation about priorities of a higher educational institution. Long-term presence of the factor of closeness of a certain business-information of a high

school can lead to full revision of strategy of its development, down to change of the status which can be not characteristic for the given region. With reduction of graduation of schools, with the advent of a plenty of private high schools, the opportunity of training abroad, the modern high school, not wishing to lose the positions, should be not simply open, but it should be able to present with all accessible means all aspects of its functioning to the society, and first of all, using its own site. It also will allow to involve foreign students as well. Thus the organization of educational process should meet the world standards, instead of copying school class-fixed system. In general the question of organization of educational process corresponding to world tendencies demands discussion behind frameworks of the present article.

## Sources of business-information of a higher educational institution

As for the sources of information, Lavin (1987) has suggested to classify business-information in two ways. The first way of classification assumes, that the information can be either primary, received as a result of research or the analysis initiated by the organization, or secondary, received of any already available sources. Thus the second

way subdivides the information on internal and external in relation to the organization. Further Lavin classifies secondary sources on character of access to them. Those sources can be :

- public, accessible to any researcher;
- private, proprietary for the certain company, institute or fund (but with an opportunity of access to them for a payment);
- subscription, representing a hybrid of public and private sources when the information is in someone's property, but it is constantly updated and becomes accessible to the certain limited circle of subscribers (Davis & Meyer, 1988).

Figure 1 describes classification of sources of information, divided on strategy of search, with reference to higher educational institutions. Thus strategies can be either official, using the specialized suppliers of the information, or informal, using various channels; they also can be active (when sources of information are searched) or passive (the analysis of the information from already known sources). Use of various combinations in the context of use of special software can be quite sufficient. However it is necessary for the leader to remember, that it essentially depends on researched object or process (Garnham, 1983).

Fig. 1. Sources of information search

FORMAL		INFORMAL
A	<i>Educational associations</i>	Every possible sort suppliers of educational services
C	<i>Government agencies</i>	Exhibitions, including foreign ones
T	<i>Commercial establishments</i>	Conferences
I	<i>Libraries</i>	Symposiums
V	<i>Suppliers of commercial information</i>	
E		
P	<i>Working system of maintenance</i>	Acquaintances
A	<i>Banks, bookkeepers, auditors, etc.</i>	Voluntary given literature
S	<i>Instructions, information, bulletins, sites</i>	Mail-shots
S	<i>Special search computer systems</i>	Presentation
I	<i>Special computer information systems</i>	Business-club
V	<i>such as "Law League"</i>	
E		

By search of sources of information it is necessary to give special attention to such questions, as cost and concreteness of the received information and its reliability. Our experience confirms, that there is a direct dependence between quality and the cost of the necessary information. A typical example is the computer system "Law League". The most essential to the received information are the source, term of its urgency and the analysis. Though the reputation of a source is very important, ways of its reliability proof is absolutely another business.

Development of information technologies has increased number and has raised the level of use of databases on CD-ROM and in the online mode, giving both quantitative, in particular statistical and detailed financial, and the qualitative information. It is especially important to note, that existing sites of

universities, and the main thing of the Ministry of Education and Science of Ukraine, substantially, cope with such representation of the information. We shall say, that presence of information on tuition fee, on the list of accredited specialties, conditions of admission, etc. help to correct in due time its own activity.

Certainly, the time of creation of independent organizations conducting independent rating of higher educational institutions has already come. In connection with sharply increasing stream of the information proceeding by means of the Internet, it is important to have the specialized systems, allowing to carry out selection of the necessary information, providing thus utility of the accessible business-information. And the effective systems of information interchange which have appeared recently in a mode of real time allow to

deduce a number of processes on completely other qualitative level. For example, the organization of the introductory company of high school at which the management can operatively observe dynamics of change of the sent applications and in due time to bring the certain corrective amendments. The tuition fee, realized in the mode of real time allows to make the decision operatively both on dismissal for nonperformance of contract, and to predict a financial situation of high school. The same concerns carrying out of sessions, etc.

Essentially new, possible to say, qualitatively new opportunities, information technologies provide access to primary sources of information inside the high school. The information-analytical system of University allows to collect effectively the actual information on such key aspects of ability to live of high school, as the list of staff, the staff, wages, transfer of wages to bank accounts of the personnel; the entrant, contingent, curricula, progress, the scholarship, transfer of the scholarship to bank accounts of students, payment from bank accounts of students for a dormitory and other services, tuition fee, etc.

Thus the system can provide reliability and urgency, being integrated and corporate, providing each leader, the expert and in general the user with its strictly individual level of access to the data. In this case there is an opportunity of generation of any type of the reports above the stored data unequiv-

ocally corresponding to functional duties of leaders and experts, and also creation of reports for official bodies such as the pension fund, tax administration, statistical management, the Ministry of Education and Science, etc. At such approach we can formulate four important principles of use of information technologies :

1. *between the expert, including the leader, and the information technology used by it in the subject activity should not be the intermediary (mean the programmers creating corresponding software product);*

2. *rights of access to the data and reports above the data should correspond strictly to functional duties of corresponding leaders and experts (for example, the expert of the staff department controlling the contingent, has the right to viewing and change of the data concerning the contingent, and anything more; the rector or the vice-rector has the right of viewing of the information, but has no rights to its change, the employee of a planning-financial department has access on viewing and change of permanent appointments, but not on viewing of wages of the personnel, etc.);*

3. *the system should be integrated from the point of view of data storage;*

4. *the system should be corporate from the point of view of access to the data and reports above the data.*

## 2. Role functions of the business-information

Diebold (1985) emphasized, that the information need is implicitly present at each action of the manager. He approved, that all work at modern office shares on six basic parts :

- *input*, gathering of the raw data;
- *communications*, moving of the information from one source to another;
- *processing*, transformation of the information from one form in another;
- *storage*, preservation of the processed information;
- *search*, process of access to the stored data;
- *output*, formation of the data or information as user-friendly (Diebold, 1985).

This classification coincides with the point of view of Drucker (1967), who has suggested to apply as distinctive feature of the leader its ability to supervise and use knowledge. Now it is the standard point of view. But, nevertheless, disputes concerning the nature of the information and the degree in which it can be used proceed (Drucker, 1967).

From our point of view higher educational institutions use the information in the following basic purposes :

- for maintenance of the simple and expanded functioning the University

including increase of the contingent, expansion of the spectrum of educational services;

- for maintenance of the steady development supposing reduction of uncertainty and reduction of risk, in connection with acceptance of these or those administrative decisions. For example : opening of new specialties, structural divisions, including branches, expansion of the certain part of the material resources demanding of constant updating, etc
- for reception of influence on the certain aspects of the society life as a whole and the region in particular;
- for the control and estimation of efficiency of activity of a high school on internal parameters (for example : progress, quality of knowledge of students, qualitative structure of PPEs, presence of computer base, library fund, etc.);
- for the control and estimation of efficiency of activity of a high school on external parameters (for example : employment, responses of the enterprises about quality of work of graduates, participation in the international programs, etc.).

In our opinion from these roles of the most important is the reduction of risk. It is theoretically possible to make the decision, not based on any information at all. Seldom, but it happens, that the management of high schools

makes a decision, proceeding from "political" reasons, for example, installation of special extra charges to these or those categories of the personnel on a background of impossibility of change the tuition fee and constantly raising wages under Resolutions of the government.

Thus, the state, supporting the general fund with corresponding money, dooms unchangeable special fund to impossibility of adequate actions. A serious misbalance arises between profitable and account parts of a University. Therefore the opportunity of modeling of those or other processes connected to acceptance of corresponding decisions is the factor of essential reduction of risks. Obviously, such opportunities of work with huge files of difficulty structured, multilayered business-information open at presence of serious corporate, integrated, personalized information-analytical system.

As only it provides enough tools of management for each level of a high school management, from managing faculty and the dean of faculty, up to vice-rectors on directions and the rector of University. *It is represented to us, that at sharply narrowed educational market that is objective consequence of a demographic problem in Ukraine, asymmetry of the information in this area will give advantage to high schools, actively, consecutively and systematically using information technologies for making of administrative decisions.*

## The basic processes of gathering of the business information of a University

The active process of gathering information begins when there are no other ways out, and is focused on concrete decisions or events. Unfortunately, but it is an integral part of our mentality, such process seldom happens constantly and realized as process of gathering of the information. It is seldom that a high school conducts studying in the educational market from the point of view of definition of own long-term and strategic policy. Most often spontaneous, situational decisions are made, called to solve concrete problems, more often of "fire" character (Galliers, 1993).

Not giving value to regular gathering of information as component of functioning of a University, the high school not today but tomorrow, not tomorrow, but the day after tomorrow will face the insuperable problems demanding extraordinary measures. In our opinion, it is necessary to include purposeful work on regular gathering the information in structure of actions on annual planning and drawing up of the budget, on coordination of strategic decisions with forecasts of external and internal conditions, on development of new educational services and minimization of the cost price of spent



actions. Moreover, the top management of a high school should carry out selection of ideas of subordinate heads with the purpose of operative correction of directions of information search (here speech can go about restructuring faculties, change of working plans, nomenclatures of specialties, carrying out of professional orientation work, etc.).

It is obvious, that various kinds of the information are collected, using various ways. For example, the information on entrants, competitors – it is more informal, than, say, financial or legislative. And, though gathering of the information represents a combination of official and informal circuits more often, today at presence of set of sites of the most different organizations, the steady tendency of use of the official approach is observed, that naturally reduces risk of making of unbalanced decisions.

*Thus, gathering of information as continuous process of functioning of University can consist of two basic parts : continuous gathering with the subsequent ordering of general business data from informal sources, and also constant updating of the business-information from official networks.*

## Problems of formation of skills of management of the business-information

Adequately projecting definition of the information on corresponding knowledge and skills which are required to the head for efficient control, it is possible to tell, that it is : search, structuring, storage, manipulations and the analysis. Certainly, it is important to provide adequacy between the competence of the head in the field of information technologies and that stream of the information which it is obliged to reinterpret for decision-making. For example, the spam shaft of the information in a mail box of the manager can literally steal significant time and bring an attention to the question on transfer of this work to the secretary. But, selection of the information – the main function of the leader.

As soon as it is transferred on the device, the manager ceases to own a situation. How to find a golden mean ? And in fact it is only a small example of work with e-mail. And if to take set of the routine reports generated by information-analytical system, which are necessary for interpreting (for example, reports on consumption of municipal services in a section of divisions and time dynamics), for the further relaying to the subordinate people the following conclusion arises :

- *the head should possess professional enough skills of management of the information for the effective organization of own work. Thus it should distribute work at the office so that to receive as much as possible structured information in the dynamic form, allowing to see those or other tendencies of development of division or the whole high school.*

When the available information cannot be operated, it results in waste of resources (time, personnel, material, etc.). In this respect Delano Slot said well: «If we operated the money the same as we control the information we would already be ruined».

Thus, management of the information in the theory and in practice results in the basic two problems. First of them is connected to a problem of selection of the business-information. At its decision it is necessary to define a precise system of typological criteria which, on the one hand, will help to choose purposefully the necessary material, minimizing time for its interpretation, and, with another, will not allow to miss the really necessary and important information. The second problem consists that reception and distribution of the information are last stages in an information circuit of decision-making. Seldom when the necessary business-information has recommendations of its most effective application.

For today the new discipline «knowledge management» has appeared, which is naturally connected to the discipline «information management» (Venzin, 1997). Though management of the information includes first of all questions of search, selection and gathering of the information, knowledge management essentially more widely and includes such sections, as: identification of knowledge, knowledge management, development of knowledge and use of knowledge, that accordingly assumes the decision of such questions: how to receive, use, distribute and transform knowledge (Babbar & Rai, 1993).

Thus the theoretical context told above constantly corresponds with search of practical benefits for the University. It is represented, that there comes time when the institute of professional managers of the high schools should appear, directly submitting to the rector, but making decisions, independent enough, on the basis of the Legislation and within the framework of the strategic directions determined by the Academic Council of University.

## Questions of use of the business-information

For many of us the slogan that the information is a strategic resource became not so simply habitual, it became imperceptible, worn out

phrase describing the present stage of development of a human civilization. However we shall allow to give an example, allowing to realize all importance of the information, but at presence of technologies allowing its interpretation and adequate reaction. Such example can be constant, monitoring of a condition of a human body per second with the help of the chip integrated into a body. On any arisen problem, the corresponding medical technology reacts. The result is a genetic realization of long living of the mankind. It is what Bill Gates names creation of electronic nervous system. Is it possible to live without it? It is possible. But in what position there are

two high schools differently realizing information technologies in management. From our point of view, vision of the well-known businessman Gates can be interpreted in such a manner that there comes an epoch when advantage of universities will be determined not simply by skill to extract and process the business-information (today technologies of the Internet allow to have access actually to unlimited information resources), but skill to transform it in knowledge. And only in this case we can receive the following strategic advantages at use of integrated, corporate, personified information-analytical system, resulted in the below-mentioned table :

Table 3 - Strategic advantages at use of information-analytical systems

Expansion of a spectrum and quality of educational services	due to allocation of the information on a site of University, due to speed of the information updating, due to an opportunity of off-line dialogue of students and teachers, etc.
Efficiency of organization of educational process	there is an opportunity to essentially improve the organization of independent work of students, as before carrying out of lectures, practical and laboratory works, and during time and after their carrying out
Realization of financial transactions	full automation of charges of the salary, scholarship, their transaction into personal bank accounts, tuition fee, dormitory payment, etc.
Expansion of students contingent	first of all due to the organization of the remote form of training
Improvement of the environment of education	due to creation of Internet-places in libraries and in places of residing of students, using mainly technology of radio-access point
Use of modern technologies of education	due to realization of personality-oriented technology of education
Realization of online and off-line advertising	due to the location on a site of University of all necessary information on conditions of admission, education, residing, rest, etc.

Increase of competence	due to the use integrated, corporate, personalized information-analytical system
Improvement of conditions for carrying out of research work	due to opening of mail boxes to all teachers and students, due to fast and duly access to information resources of other high schools, etc.

Thus, new information technologies provide qualitatively new sources, methods of delivery and information interchange, and absolutely different ways of manipulation with it. During the change of work character with the business-information the main thing is development of skills of information management and an opportunity of its transformation in knowledge. Reconsideration of activity of a higher educational institution in a context of use of information technologies for efficient control, will allow it to provide own competitive advantage in the educational market.

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# MANAGEMENT & SCIENCES SOCIALES

*Sous la direction de Luc Marco*

N° 2 (décembre 2006)

## ÉTHIQUE ET RESPONSABILITÉ DES BANQUES

Entre perte de confiance et prise de conscience, les implications de la responsabilité sociale sont souvent peu comprises par les banques, tant en termes de risques que de création de valeur potentielle. La question est alors celle de la légitimité des banques et plus généralement de la sphère financière dans la mise en place de processus relevant de l'éthique, de la responsabilité sociale et du développement durable, éléments qui sont fondamentalement compatibles avec la recherche de rentabilité. Ces processus sont-ils le fait d'un type de banque en particulier ? Peut-on vraiment concilier la rentabilité des banques, l'éthique et la RSE (Responsabilité Sociale des Entreprises) ? Ce dossier répond à ces questions grâce à un ensemble cohérent de dix contributions.

### Entretiens & interviews

*Les liens secrets ou apparents entre la science-fiction et la littérature par Pierre Bourdieu. Cet entretien est suivi de l'interview de la juriste Florence Bellivier, qui présente ses recherches sur le droit du vivant. Elle s'intéresse aux problèmes de brevets des entreprises bio-technologiques et aux questions cruciales de contrats qu'ils entraînent. Ces questions sont fondamentales pour les gestionnaires du domaine.*

### Sciences Sociales : regards croisés

Le management envahit tout le champ social : la question sécuritaire, l'animation des territoires, la gestion hospitalière, et même les formes des bouteilles. Les articles ici réunis confrontent les règles managériales de base et la nature spécifique des domaines envahis. Les auteurs sont des professionnels ou des chercheurs qui travaillent sur les liens entre management et règles de comportement social.

*Ce numéro a été coordonné par Andrée de Serres (UQAM) et Michel Roux (Paris 13). Les auteurs du dossier sont Diane Girard et Allison Marchildon (HEC Montréal), Georges Gloukoviezoff (Université Lyon 2), Inmaculada Buendía-Martínez et Benoît Tremblay (HEC Montréal), Andrée de Serres, Corinne Gendron et Lovasoa Ramboarisata (UQAM), Emmanuel Darankoum (Université de Montréal), Michel Roux (Université Paris 13), Yves Séguin (ancien Ministre des finances du Québec). Les entretiens ont été réalisés par Yann Herno et Luc Marco. Les articles sont signés par Eric Marlière (consultant territorial), Yann Herno (IUT de Bobigny), Philip Mondolfo (sociologue), Elisabeth Noël-Hureaux (Paris 13), Jean-Pierre Mathieu (AUDENCIA), et Michel Le Ray (Université de Valenciennes).*

**L'Harmattan**



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Tout article adressé à la revue **GESTION 2000** est soumis à un Comité de lecture: il est donc lu par au moins deux personnes, du milieu universitaire et du monde de l'entreprise, sans indication du nom de l'auteur. L'article est alors accepté, refusé ou accepté sous réserve de modifications.

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