

## **Research on Developing and Implementing Strategic and Operational Plans in Universities**

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**ABSTRACT** In the development of a university is an important place the university setting strategy, the direction to follow. In the current context of profound changes in the economy managers in universities face a number of new notions such as vision, mission and objectives. Analysis of internal and external environment of the university offer insights and answers to some questions about "possibilities" that the university has for development. Increasingly this information is processed by university managers objectives are translated into strategic and operational plans. In the present study was conducted a marketing research among teachers at the Technical University of Cluj-Napoca, on how they participated or participates in developing and implementing the university's strategic plan and operational plans of the faculties of the university . Since the development and implementation of these plans is the responsibility of top management in universities / colleges, I think it is important to this research because it allows determination of how the objectives of these plans are known and the "actors" university making contributions to these plans. The research included all the faculties of the university teachers were randomly selected based on stratified method, the sample under investigation including a number of 336 persons.

### **1. Introduction**

An important problem which had been discussed among numerous specialists in the literature is constituted by the way an organization evolves, adapts and changes along with the changes occurred in its environment (Zack, 1999; Wiig, 1997; Eddleston et al., 2008; Klein, 2008; Lockett et al., 2009; Nonaka, 1991; Olsen & Haslett, 2002; Teece, 1984).

In the organizational theory there are many opinions: one which considers the organization is dependent on the environment, by modifying itself along with it, another one which considers that the organizations have the liberty of action, adapting themselves at a response to the changes, and the third opinion sustains that the changes are made by the organizations through their top-managers who through their entrepreneurial actions influence the environment (Smith & Cao, 2007: 329-330; Alvarez & Barney, 2007).

Being connected by the way of functioning and the wellbeing of the organization in which we develop our activity, the author M. Schwaninger underlines the fact that in each organization, its management must be preoccupied by 4 central factors: creating the conditions for determining the change, correlating the strategic and organizational changes, the human resources and the coherence in the actions performed (Schwaninger, 2000: 237). In his paper, M. Schwaninger, underlines that the main problems encountered by organizations are: regulatory problems—problems of auto-control, self-steering, and self-reference. (Schwaninger, 2000: 207).

Leaving from these theories, we note that in academia, universities in Romania through actions top managers are involved in the product changes, influence this environment and how each university sets its policies and business strategies contribute to the further development of university (Păun & Stanciu, 2008; Wong, 2004).

Adaptation, conversion or development of a university can be made by managers by analyzing internal and external environment of the university, which provide data to determine the strategic actions (Taylor & Machado, 2006). These actions are transformed into strategic goals that are formulated in the university's strategic plan and once established should be implemented. Implementation stage is considered to be the most important because of this stage depends on the success or failure of a strategic plan (Johnson & Lipp, 2007). For this stage to be made known the objectives must be discussed so that they are accepted by many participants in the implementation process, that there is "the myth of control" (to have those basic beliefs, values and meanings underlying the exercise of management in organization) (Bowles, 1997).

### **1.1. The importance of strategic plans in universities**

The importance of some strategic plans starts from the well known advantages which it offers: they allow the definition of a trajectory to follow by formulating realistic objective in concordance with the university's mission (this once formulated are stated and detailed on constitutive elements of the organization), they allow the efficient use of the resources by directing them by elements (priorities) key to development, they are established on a grater period of time which allows the registration of the accomplishments and also the evaluation and correction of some possibly discrepancies.

Beside the stated advantages, in the fulfillment actions of the strategic plans any university by own leadership can achieve real bridges of connection between managers of superior level and staff by creating teams which conclude around a common vision. These allow the fulfillment of the connection binder between leadership and administration leading to the accomplishment of results trough common effort.

The strategic objectives include what should be done, which are considered the final results and specialists C. Brătianu and V. Lefter believe that they "take the vision and mission of the university basic ideas and measures and condenses in them all will and its capacity for development and of accomplishment in the context of creating a strategic competitiveness [Brătianu & Lefter, 2001:41].

In universities, the strategic objectives are included in the strategic plan. The strategic plan includes an abbreviated form of the university status, goals and strategies chosen to achieve the objectives, namely how to obtain and allocate resources necessary to achieve them.

Importance of developing these plans is outlined in their work, both specialist I. Ciucă and Brătianu being amended so as containing especially the consequences they produce with their development and implementation, and I quote: " consequences that may materialize in a more organized and efficient thinking, leading to the beneficial effects on the university and therefore all those who contributed [Brătianu, 2002:148; Brătianu & Ciucă, 1999]

To develop strategic objectives, management of universittate should conduct an analysis on the following aspects:

- structure by identifying the university faculty, specializations, cycles of study for day education, and for other forms of education;
- number of physical and equivalent students at faculties and specializations, but also in terms of student status (budget or fee);
- structure of the university teaching positions and their occupancy rates;
- the structure of auxiliary teaching staff posts;
- structure in research stations;

- situation existing laboratories and facilities, by faculties;
- classroom situation, the common areas and existing facilities, the faculties;
- information system from the university and separate by faculty and administration;
- existing educational material situation from the university libraries;
- situation and lodging facilities, by highlighting the relevant areas and occupancy rates;
- situation for the consolidation work of the buildings, grouped by investment objectives;
- situation of building capital repairs;
- financial situation of university income and expenditure;
- inter-university agreements status, cooperation between universities.

As the strategic objectives are "targets" that university management must achieve, it is considered that they should be more realistic and better defined.

To achieve strategic objectives, university management sets a series of strategies, aimed at defining the components and the mode of action to achieve them.

University management through its actions should conduct formulating strategic and operational plans and objectives and dissemination of all information that is contained in these plans. For a university objectives can be achieved they must be known to many "actors" so they can be transformed into "belief".

Author B.R. Clark in his work highlights the importance given to organizational culture and I quote: „ *An institutional idea which works its way into a university should be known by many actors and be linked to other ideas. As related ideas are expressed into numerous structures and processes and therefore maintained, we can consider them the institutions beliefs, which put into value the distinctive features. Successful entrepreneurial beliefs, which emphasize the willing to change, can spread over time throughout the whole institution, becoming a new culture* "(Clark, 2000, p.200).

## **1.2. The importance of the study**

In this paper it has been developed a study ay the Technical University from Cluj-Napoca, on how the goals of the strategic plan of university / faculty and the operational plan of the university / college teachers are known by the university. The importance of the study leaves from the importance given to the knowledge of strategic and operational plans by as large a population of teachers.

Also it was taken into consideration, not knowing the strategic and operational plans by employees leads to the impossibility of participating to their implementation.

## **2. Materials and Methods**

The data brought out into the study were collected by questionnaire. Questionnaires had been distributed to a number of teachers set a random sampling method. The study included teachers from all faculties of Technical University of Cluj-Napoca and the method used was stratified method.

For sizing the sample size the following formula was used [Balaure, 2000]:

$$n = \frac{t^2 \times p \times (1 - p)}{e^2} \quad (1)$$

where  $n$  = sample size;  $t$  = degree of confidence, the coefficient that corresponds to the probability with which the research results are ensured (degree of confidence is reflected in the statistical tables of the student distribution to be equal to 1.96 for a threshold of 5% significance) default scientist;  $p$  = proportion of components in the sample who have researched feature;  $e$  = error limit intake (materiality) was chosen equal to 5%. Since it is difficult to estimate the value of the parameter  $p$ , we established that 0.5 is the value of this parameter.

The calculated size of the required sample the study was:

$$n = \frac{t^2 \times p \times (1 - p)}{e^2} = \frac{1,96^2 \times 0,5(1 - 0,5)}{0,05^2} = 384 \quad (2)$$

Teachers have been sorted and the study in several stages:

- was calculated the share number of teachers in each college leaving from their share in the university;
- was elected chair / chairs of each college;
- was elected to the share of second degree after degree teaching teachers.

The distribution of university teachers according to educational level is shown in Table 1.

*Table 1. Ratio of teaching staff by didactical grade*

FACULTIES	P	A	L	AS	P	% TS
ARH	1.44	6.40	5.10	3.97	16.00	4.78
AC	13.46	15.20	21.02	15.23	52.00	18.67
C-TII	13.94	11.20	14.01	22.52	10.00	15.05
CM	22.60	18.40	17.83	13.91	4.00	17.51
ETC	10.10	10.40	5.73	16.56	6.00	10.27
IE	15.87	12.00	6.37	11.92	4.00	11.29
IC	1.92	7.20	5.10	2.65	6.00	4.05
MEC	11.54	8.00	9.55	6.62	0.00	8.54
SIM	9.13	11.20	15.29	6.62	2.00	9.84
TOTAL	100	100	100	100	100	100
P – Professor; A – Associate Professor; L – Lecturer;			AS – Assistant Professor; P – Teaching Assistant ; TS – Teaching Staff;			

The following abbreviations were used for the faculties:

- ARH = Faculty of Architecture and Urban Planning,
- AC = Faculty of Automation and Computer Science,
- C-TII = Faculty of Civil Engineering, CM = Faculty of Machine Building;
- ETC = Faculty of Electronics, Telecommunications and Information Technology;
- IE = Faculty of Electrical Engineering,
- IC = Faculty of Building Services;
- MEC = Faculty of Mechanical Engineering,
- SIM = Faculty of Materials Science and Engineering.

The distribution of the sample subject of the research is presented in Table 2.

**Table 2. Distribution of teaching staff on faculties according to the didactical grade**

F	P	A	L	AS	P	TOTAL
ARH	2	4	4	4	4	18
AC	15	9	13	14	21	72
C-TII	17	11	7	19	4	58
CM	22	14	14	15	2	67
ETC	13	7	4	13	2	39
IE	20	6	6	11	0	43
IC	2	4	5	3	2	16
MEC	12	6	8	7	0	33
SIM	12	8	10	7	1	38
<b>TOTAL</b>	<b>115</b>	<b>69</b>	<b>71</b>	<b>93</b>	<b>36</b>	<b>384</b>

For this study, the following objectives had been established:

*Objective 1 – Determinating the degree of knowledge of the objectives of the strategical and operational plan of the university and of the college.*

Hypothesis 1: Teachers are informed of the objectives the strategy and operational plans.

*Objective 2 - Identifying the degree in which are known the categories of the personnel involved in the preparation and implementation of these plans and if the teachers had been informed and consulted about these stages.*

Hypothesis 2. Teachers know the academic actors involved in the preparation and implementation of these plans.

Hypothesis 3. Teachers were consulted in the preparatory phase of these plans.

The main questions brought to the study are:

- D1. Do you know the objectives of the strategical plan of the university?
- D2. Do you know the objectives of the strategical plan of the college?
- D3. Do you know the objectives of the operational plan for the current year from the university?
- D4. Do you know the objectives of the operational plan for the current year from the college?
- D5. In your opinion the contributions to the implementation of the strategical plan are brought by....
  - the academical management (Univerity Senate)
  - teachers (outside the University Senate);
  - the students;
  - the personnel services from the administration;
  - information from the external environment.
- D6. Please specify to what extent: .....
  - you were consulted in the stage of elaborating the strategical plan;
  - you were consulted in the stage of elaborating the operational plans;
  - you are among the first members which participate to the implementation of the strategical plan;
  - you are among the first members which participate to the implementation of the operational plans;
  - you consider that the objectives from the strategic plan are in correlation to the resources of the University;
  - you consider that the objectives from the strategic plan are in correlation to the resources of the college;

The possibility of response were „Yes” and „No” for the questions D1-D4, or according to the scale of importance to questions D5 and D6 (Table 3).

**Table 3. Variations of response to questions D5 and D6**

1	2	3	4	5
Not at all	Low	Average	High	Very high

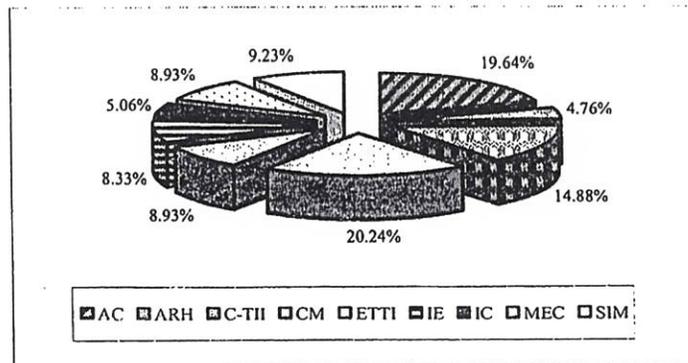
**3. Results**

The analysis of questionnaires for teachers first revealed that from 400 questionnaires distributed were returned a total of 336 questionnaires. Questionnaires were distributed to all faculties of the university after the random choice of the department / departments and teachers.

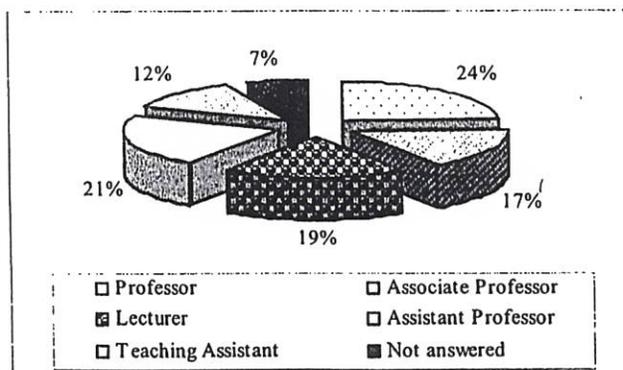
The research sampling error for this survey was:

$$e_{cadre\_didactice} = z \times \sqrt{\frac{p(1-p)}{n-1}} = 1,96 \times \sqrt{\frac{0,5(1-0,5)}{335}} = 0,0535 \quad (3)$$

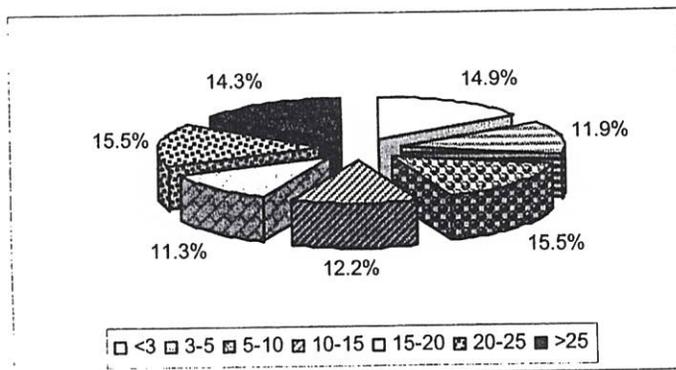
After processing the data it has been obtained the distribution of teachers in colleges, by teaching degree in education and by age are presented in Figures 1-3.



**Figure 1. Distribution of teachers in colleges**



**Figure 2. Distribution of teachers in colleges by teaching degree in education**



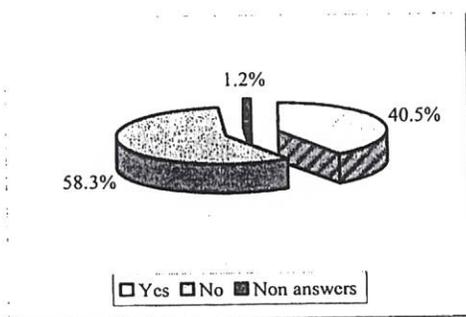
*Figure 3 Distribution of teachers in colleges by age*

For each question and possibility of answer it has been quantifies the answers and the non-answers (Tabel 4).

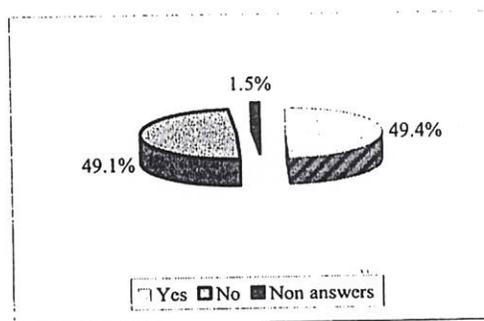
*Table 4. Distribution of the answers and the non-answers at the questions brought to the study*

QUESTIONS	ANSWERS	NON ANSWERS	TOTAL
D1	332	4	336
D2	331	5	336
D3	330	6	336
D4	331	5	336
D5	316	20	336
D6	318	18	336

The results obtained after pprocessing of questions D1-D4 are shown graphically in Figures 1-4.



*Figure 1. Responses to the question D1*



*Figure 2. Responses to the question D2*

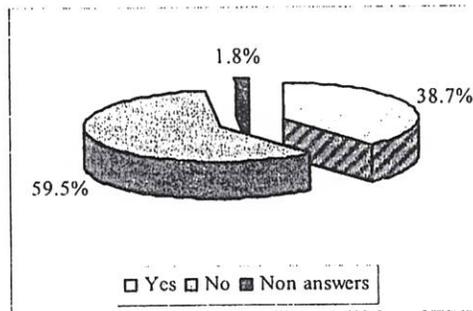


Figure 3. Responses to the question D3

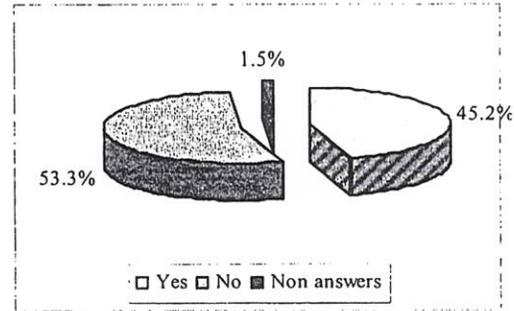


Figure 4. Responses to the question D4

The data obtained were statistically processed resulting in statistical parameters presented in Table 5.

Table 5. Statistical parameters for data from question 5 and 6

Parameters	D5a	D5b	D5c	D5d	D5e	D6a	D6b	D6c	D6d	D6e	D6f
Valid	316	318	314	316	311	327	326	327	324	298	298
Mean	3.696	2.906	2.156	2.256	2.653	1.544	1.576	1.633	1.666	2.698	2.685
Median	4	3	2	2	3	1	1	1	1	3	3
Mode	4	3	2	2	2	1	1	1	1	3	3
Variance	0.891	0.868	0.682	0.756	0.879	0.782	0.798	0.963	1.009	1.074	0.991
Std.Dev.	0.944	0.932	0.826	0.869	0.937	0.885	0.894	0.981	1.005	1.036	0.995
Std.Error	0.053	0.052	0.047	0.048	0.053	0.048	0.049	0.054	0.056	0.060	0.057
Skewness	-0.452	0.071	0.354	0.381	0.389	1.751	1.563	1.554	1.481	-0.228	-0.2615
Kurtosis	-0.265	-0.289	-0.204	-0.454	-0.094	2.598	1.878	1.637	1.329	-0.757	-0.633

#### 4. Discussion

From the analysis of the statistical parameters calculated in Table 5, for the question D5 we find that the average value is around 2 and 3 (2 = small extent, 3 = average extent), median takes the value 2 for sub-paragraphs c and d), 3 (to subparagraphs b and e) and 4 (4 = in large measure) to point A. The modal expressing central tendency of the population studied coincides with the median (except for point E). The standard deviation takes values near the value 1 (1 = not at all), the curving takes negative numbers and underlines that the trail is approaching faster compared with a normal distribution, the asymmetry - hump is right for positive values and to the left for negative ones.

From the analysis of the statistical parameters calculated in Table 5, for the question D6 we find that the average value is around 1 and 2, the median is 1 for all sub-paragraphs (except subparagraphs e and f), and modal value coincides with the median. Standard deviation ranges close to 1, the curving take positive and negative values (for the negative result that the train is approaching faster compared with a normal distribution), the asymmetry - hump is right for positive values and to the left for negative ones.

## 5. Conclusions

The scientific research conducted among teachers (the main suppliers of each university), we tried to identify certain views, views that could clarify, assist, or contribute to a picture of the key points considered important.

The surveyed assumptions were verified by comparing values obtained from the assumptions made by the amount of 50%, considering the hypothesis is validated for more than or equal to this value and invalid for more than 50%. The analysis results were the following conclusions:

- Hypothesis 1. was not validated (*Teachers are informed of the strategic plans and operational objectives*) registering 40.50% who say that know the objectives of the university strategic plan, 49.40% who say that know the objectives of the strategic plan of the faculty, 38 , 7% who say that know the operational plan objectives of the university, which states that 45.2% meet the objectives of the faculty operational plan (for response options 3-5);
- Hypothesis 2. was validated (known actors university teachers involved in the preparation and implementation of these plans) claiming a rate of 83.3% that management make academic contributions to the Strategic Plan (University Senate), a proportion of 63.4% of teachers (outside the University Senate);
- Hypothesis 3. was validated (Teachers were consulted in the preparatory phase of these plans) 12.5% said they had been consulted in the preparatory phase of strategic plans and 15.2% said they had been consulted at the stage of developing operational plans. Although the percentage recorded in this case has a low value (below 50%) is considered significant because it is consulted in the preparation of these plans can be made by type 1-1 but only through representatives.

Management activities in a university requires on the one hand teaching activities, and on the other activities of the university administration.

Research has gone from treating teachers as the most important "players" in an effort to determine their opinion. Knowing the opinion of teachers permits the realization of comparisons and can be a starting point for future management guidelines.

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