STUDENT ENROLEMENT MANAGEMENT. CASE STUDY AT THE COMPUTER SCIENCE DEPARTMENT

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Abstract *In this paper, we will present a case study regarding the current situation in the strategic management of student enrolment for the Department of Computer Science, Engineering Faculty.*

We will present some theoretical aspects of the strategic enrollment management applied by the Computer Science Department.

Based on a questionnaire we will identify the geographical area where the students came from and their motivations to enroll to this specialization. In addition, we will analyze the expectations of students regarding their future employment.

Keywords*: Strategic Enrolment Management, student enrolment*

JEL classification: *Y80, Y100*

1. Introduction

The enrollment of students into an undergraduate or a graduate program became in the last years a very important aspect of the strategic management.

The most important resource of a University is its students. They want to study in different undergraduate and graduate programs to have after graduation

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successful careers and a fulfilling personal life. Very important are learning opportunities inside but also outside the classroom. Our Computer Science Department has responded to student interests, faculty pressures and continued to develop and grow. However, this growth was spontaneous and unmanaged driven by the thought that a greater number of students will have positive effects.

Strategic enrolment management (SEM) could be an answer for rational development of the department.

2. Definition of Strategic Enrollment Management

SEM is a process to plan the number of enrolled students, to offer students support and to improve the student experience. There are several definitions for the SEM concept. The definition given by Bontrager (2004) is:

"Strategic enrollment management (SEM) is a concept and a process that enables the fulfillment of institutional mission and students' educational goals."

Hossler and Kalsbeek (2013) give a recent definition:

"The S in SEM may more appropriately now stand for "sustainable" rather than strategic because of the changes of external environment. Enrolment management leader needs to answer the call for a sustainable enrolment strategy for achieving institutional goals."

In Wikipedia (2015) there are presented some of the components of the SEM:

- Characteristics of the institution and the world around it
- Institutional mission and priorities
- Optimal enrollments (number, quality, diversity)
- Student recruitment
- Student fees and Financial aid
- Retention
- Institutional marketing
- Career counseling and development
- Academic advising

- Curricular and program development
- Methods of program delivery
- Quality of campus life and facilities

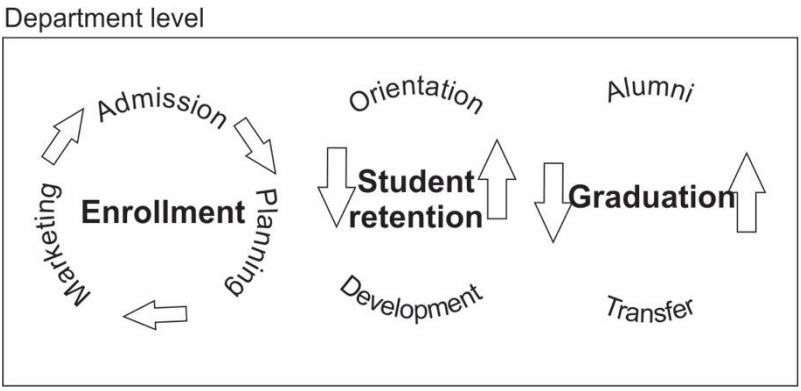
There are many other definitions but we have decided to present only these.

3. SEM at Computer Science Department level

From the presented components of the SEM we have tried to identify some components on which we can intervene in order to improve the quality of our department activity.

In Figure 1 we present the three key aspects that are important for our department: the enrollment level, the student retention level and the graduation level

Figure 1: SEM at department level



4. Experimental study and results

In our experimental study, we have focused over the enrollment of students to the programs of our department. These programs are:

- computer science;
- information technology;
- multimedia systems
- electromechanics

- electronics

We have performed a survey using a web questionnaire for the students enrolled in all four years. The questionnaire can be found at *https://docs.google.com/forms/d/12YAms5d114qMZ7-Hcs-dWbWDLPBSgp2YIXrZ4d1b3mw/viewform?edit_requested=true*
In a period of 3 weeks, 272 students have answered. In order to process the date we had to perform a cleaning phase of the data because not every answer contained atomic data.

The idea of this questionnaire is to be given to the students each year for a period of 4 years in order to observe the changes in student's perception of their development and employment possibilities.

First, our questionnaire contained questions regarding the program, which the students are enrolled to. In Table 1 we present the statistic of reposes to the question "*Specialization in which you are a student*".

Table 1: Number of students in different programs

Study year	Computer and information technology	Multimedia Systems	Grand Total
1st Year	88	26	114
2nd Year	79	20	99
3rd Year	18		18
4th Year	30	9	39
Not mentioned			2
Grand Total	**215**	**57**	**272**

We can observe that no students from the electronics or electromechanics programs have answered this questionnaire. This could be an indicator that the communication in the student retention aspect is poor.
For our department it is very important to enroll enough students with a good educational background. For us it is important to know where our students come from in order to change the marketing plan at department level.

Table 2 Counties where the students come from

County	No. of students	Percentage
Alba	**18**	6,62%
Arges	2	0,74%

Brașov	4	1,47%
Constanța	1	0,37%
Gorj	2	0,74%
Mures	1	0,37%
Neamt	1	0,37%
Olt	3	1,10%
Sibiu	**193**	70,96%
Teleorman	1	0,37%
Vâlcea	**46**	16,91%

It can be observed that we have the most students from high schools situated in the Sibiu county and then frm counties neighboring the Sibiu county respectively Vâlcea and Alba.

For the marketing of our programs, this information is very important because there is a clear indication that our programs are poorly known at country level. Our programs had a good marketing for the three named counties. Our staff has visited high schools in these counties and presented directly our programs.

Another important aspect for us was the motivation of students to come to enroll in our programs. In Table 3 and Table 4, we will present the reasons why the students chose our programs.

Table 3 First reason of students to enroll in our programs

First reason	No. of students
I am interested in the domain	203
I easily find a job	49
Presentation of the programs in high school	4
Parental influences	3
Presentation of the programs in the mass media	2
It is an area of future	2
I believed that has more in common with multimedia.	1
Influenced by friends who work in the field	1
The influence of former high school classmates	1
Recommendation of a friend	1
Professional reorientation	1
(blank)	4

Table 4 Second reason

2nd Reason	**No. of students**
I will easily find a job	57
Program presentation in high school	8
Influenced by former colleagues	5
I have a logical thinking	1

From Table 3 and Table 4 it is very clear that we have high-motivated students and the decision to enroll to our programs was not taken because of our marketing strategies but for financial reasons after graduation.

For the future, it would be important to change our marketing strategies.

For the retention step in our SEM at department/program level, we have asked our students the following three questions:

- What do you think about the fact that you are a student of this specialization?
- What do you think about the chances of finding a job in your field now?
- What do you think about the chances of finding a job in your field after graduation?

In Table 5, Table 6 and Table 7 we will present statistical data.

Table 5 What do you think about the fact that you are a student of this specialization?

Program	**Very good**	**Good**	**Bad**	**Very bad**	**I don't know**	**(blank)**	**Grand Total**
Computer Science	141	62	1		3		207
Multimedia Systems	31	23	1	2			57
Grand Total	172	85	2	2	3	8	

Table 6 Chances of finding a job in your field now?

Program	Very good	Good	Bad	Very bad	I don't know	(blank)	Grand Total
Computer Science	89	94	11	5	9		208
Multimedia Systems	23	22	3	2	7		57
Grand Total	112	116	14	7	16	7	

Table 7 Chances of finding a job in your field after graduation?

Program	Very good	Good	Bad	Very bad	I don't know	(blank)	Grand Total
Computer Science	140	63			6		209
Multimedia Systems	35	20			2		57
Grand Total	175	83			8	6	

Figure 2 Opinion about program?

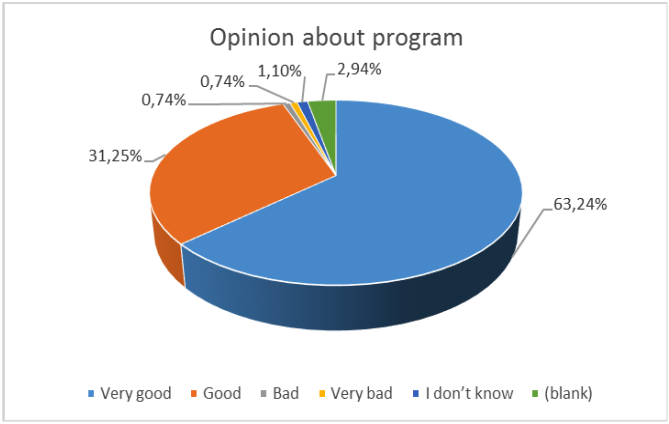
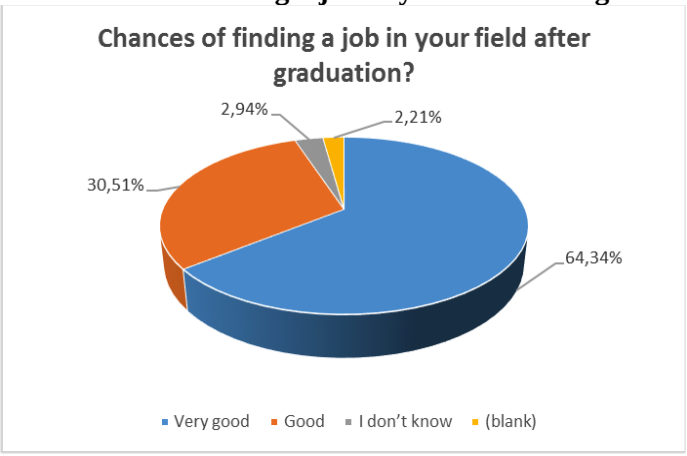


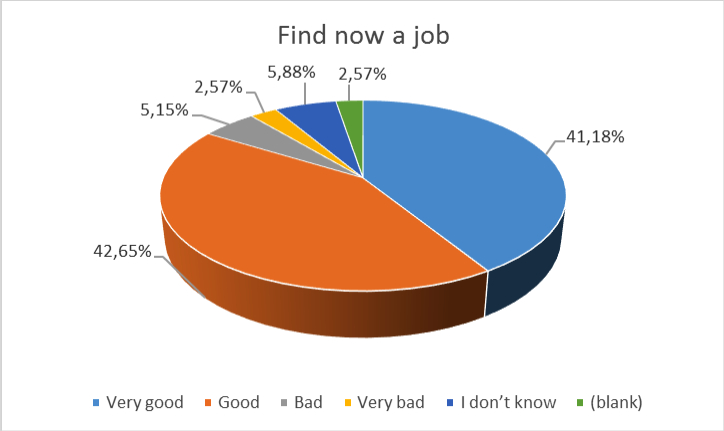
Figure 3 Chances of finding a job in your field after graduation?



If we compare the global data represented in Figure 2 and Figure 3 the first observation is that 63,24% of or our students are very satisfied and 31,25% are satisfied with the decision to enroll into their programs. This is a good indicator that the orientation given by our staff in the retention step was ok but also they are convinced that it was a good decision because 64,34% said that they consider o have very good chances to find a job after graduation.

However, in Figure 4 it is interesting to note that at the moment the students are less convinced to find a job.

Figure 4 Opinion about program?



This case could be an indicator that our staff must improve the development step in the SEM and take measures for better guidance of students and/or change some aspects in the curricula.

5. Conclusions

In this paper, we have presented some theoretical aspects regarding the strategic enrollment management (SEM) in university programs. We have also presented some key components of a qualitative SEM. Some of this components where then projected for the department (program) level.

In our study, we have gathered information using a questionnaire, which was filled–out by 272 students from al programs. We have focused on the enrollment phase and observed that some aspects regarding de marketing could be improved in order to spread over the country the information about our programs. In further surveys, we will analyze the impact of the admission test over the scores of our students and their employment quota.

6. Acknowledgment

This work was supported by the strategic grant POSDRU/159/1.5/S/133255, Project ID 133255 (2014), co-financed by the

European Social Fund within the Sectorial Operational Program Human Resources Development 2007-2013

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