Evaluation Methods of the Subjects and Teaching Staff at the "Lucian Blaga" University of Sibiu, Engineering Faculty

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Abstract: This work presents a series of results based on the evaluation process of the disciplines (subjects) and teaching staff at the "Lucian Blaga" University of Sibiu, "Hermann Oberth" Faculty of Engineering. We will present a model of a results sheet, based on the analysis of the questionnaire. We have tried to make it as comprehensive as possible in all the aspects resulted from the statistical analysis of the questionnaires. First, we will make a statistical analysis using statistical means and modes. The modes are very effective because they represent values of a statistical series that have the most frequent appearance. The means are very useful to compare with the modes. The analysis of the disciplines and teaching staff was made for each specialization and year of study, based on the answers received from the students before the exam session in the first semester of academic year 2004/2005. The questionnaires referred to the disciplines and teaching staff had real value because each teacher received the results of his/her evaluation and they had access to the result averages of all the subjects, in the same year of study, and so they could compare them.

Key-words: Evaluation, result sheet, statistical analysis, comparison, means, modes

1 Introduction

The present paper is a result of an evaluation method of the disciplines (subjects) and teaching staff at the "Lucian Blaga" University of Sibiu, Engineering Faculty – having as beneficiaries each lecturer in this faculty. The most used evaluation method is that of the questionnaire which is used in this work. The method used to elaborate this questionnaire is that of the "Nominal Group"[4], based on other questionnaires used in the "Lucian Blaga" University of Sibiu, as well as in universities from all over the country and other countries. The questionnaire has the following structure: 7 questions for the first objective subject evaluation -, 7 questions for the second teaching staff evaluation, 5 questions for the third objective - and 4 classification questions, as you can see in Table 1.

The evaluation spread over three months (from January to March 2005) and consisted in a

marketing investigation based on questionnaires. The purpose of the research is to provide information that each lecturer can rely on in order to develop his strategy of attracting students, on the one hand, and meeting students' needs, on the other hand [3].

2 Evaluation presentation

In this paper, we would like to present a model of a results sheet that each lecturer has received. The results are presented in two different ways: first, as a questionnaire frequency table (table 1) and second, as a graphical presentation where we present statistical means and modes for each question of the questionnaire and means and modes of that year of study, in order to have a comparison. In table 1 are concentrated all the questionnaire answers and all the comments that the students have made.

Table 1

QUESTIONNAIRE

0. No answer; 1. Total disagreement; 2. Disagreement; 3. Neutral/Average 4. Agreement; 5. Total agreement

OBJECTIVE I. The students' opinion about the subject:					XXXXX				
	Values according scale	to the accepted	0	1	2	3	4	5	

1.	My professional knowledge has been significantly improved by								3%	6%	0%	58%	33%
	this subject.												
2.	The volume of work was very high for this subject.								3%	3%	6%	39%	48%
3.	The theoretical aspect of the lecture was reinforced by the							0%	0%	3%	6%	27%	64%
	laboratory, seminar and project activities.												
4.	The teaching method employe	ed was	a grea	at help	in un	dersta	nding	0%	0%	0%	6%	33%	61%
	the subject.												
5.	The bibliography was availabl	le.						0%	0%	3%	18%	48%	30%
6.	The documentation that was	distrib	outed a	and/or	the b	ibliog	raphy	0%	0%	6%	18%	33%	42%
	was up-to-date, useful and of g	good qu	uality.										
7.	Global evaluation of the discip	oline	0	1	2	3	4	5	6	7	8	9	10
	(Grades from 1 to 10).		6%	0%	0%	0%	0%	3%	6%	9%	15%	27%	33%
OB	OBJECTIVE II. The students' opinion about the lecturer:												
	Values according to the accepted						0	1	2	2	4	F	
	scale							U	1	4	3	4	5
8.	The lecturer proved an excellent grasp of the discipline he/she						3%	3%	0%	0%	6%	88%	
	taught.												
9.	The lecture was delivered in a	clear a	nd we	ll-stru	ctured	manne	er.	3%	0%	3%	0%	24%	70%
10.	The lecturer stimulated the stu	dents'	interes	st for t	he disc	ipline		3%	0%	0%	9%	48%	39%
11.	The lecturer readily agreed to discuss problems related to the						3%	0%	3%	12%	30%	52%	
	discipline.		Î										
12.	The time allotted to this disc	cipline	was	efficie	ntly u	sed by	the	3%	3%	3%	0%	36%	55%
	lecturer.	-											
13.	I would like to attend another	of this	profes	sor's l	ectures	5.		3%	6%	12%	12%	12%	55%
14.	Global evaluation of the lectur	er	0	1	2	3	4	5	6	7	8	9	10
	(Grades from 1 to 10). 3% 0% 0% 0% 0%							0%	0%	6%	15%	9%	67%
OB	IECTIVE III. The students' o	pinion	about	t the le	ecture	r's pro	ofessi	onal et	thics.				
		Value	s acco	ording	to the	e acce	pted	0	1	2	2	4	5
		scale		U			•	U	I	2	3	4	3
	Dath the method of evaluation and the grading wave correct						00/	00/	00/	00/	2201	(= 0 /	

	scale	U	I	4	3	4	5			
15.	Both the method of evaluation and t	0%	0%	0%	0%	33%	67%			
16.	16. The exam was promoted only by professional criteria				0%	0%	6%	30%	64%	
17	The lecturer's attendance to the No									
1/.	17. lectures was:		under 50%	50 -	50 –75%		76 – 99%		100%	
		0%	0%	3%		6%		91%		
	The teachers' attendance to the									
18.	seminars, laboratories and projects	No								
	was:	answer	under 50%	50 -	75%	76 -	- 99%	1	00%	
		0%	0%	39	%		6%		91%	

COMMENTS : Feel free to indicate aspects regarding the discipline or the lecturer that have not been covered and are considered relevant (e.g.: the lecturer's conduct and integrity, the promotion of their exam through unorthodox methods or the fact that they accept/demand bribe and accept frauds etc.)

- fair, honest; correct
- unbiased, fair
- I don't have any objections
- The subject is not attractive at all and the exam is difficult
- Some understanding please (NB class attendance 0)
- It seems that he/she was fair

CLASSIFYING QUESTIONS:

19. My final grade was	No	Less than	5-6	7 – 8	9 – 10
	answer	5			
	0%	39%	9%	33%	18%
20 . Please evaluate your knowledge in this field	0%	27%	18%	36%	18%

21 . My last year's average grade was	No	5,00	6,01	7,01	8,01	9,01 –
	answer	6,00	7,00	8,00	9,00	10
	6%	6%	18%	33%	27%	9%
22 . I attended the course in	No	0%	1 – 25%	26 –	51 –	76 –
	answer			50%	75%	100%
	0%	3%	0%	0%	24%	73%

OTHER COMMENTS: *Please mention any aspects regarding the discipline or the lecturer that have been omitted and are considered relevant.*

• It is a very important subject, well structured but it would be helpful if more practical problems were solved

In the following charts (figure 3, 4, 5), we are showing an example of the results from question 1 of the first objective for the discipline (subject) XXXXX (a code that represents Specialties (1 digit), Disciplines (2 digits), Lecturers (2 digits)). The teacher can compare the importance of his/her results with the average of means and the average of modes from the year of study [3].

For example, the mode of the subjects' answers for question 1 was $\overline{m}_{xxxxx} = 4$, which is the same with the average of modes from all subjects of that year for question 1, $\overline{m}_{year} = 4$. Than the average of means from all subjects of that year of study, $\overline{m_{a_{max}}} = 4,04$, which is less than the average of the

subjects' answers for question 1, $\overline{m_{a_{xxxxx}}} = 4,12$.

 $m_{\text{year of study}}$ = mode value of that year of study

 m_{xxxxx} = mode value of the discipline and lecturer evaluated (code value)

 $m_{a \text{ year of study}}$ = mean of that year of study

 $m_{a \text{ xxxxx}}$ = mean of the discipline and lecturer evaluated (code value)



Fig.1

Mode values for all questions from the questionnaire in comparison with the mode values of the year



Mean values for all questions from the questionnaire in comparison with the mean values of the year

For example, the mode of the subjects' answers for question 1 was $\overline{m}_{xxxxx} = 4$, which is the same with the average of modes from all subjects of that year for question 1, $\overline{m}_{year} = 4$. Than the average of means from all subjects of that year of study, $\overline{m_{a_{year}}} = 4,04$, which is less than the average of the subjects' answers for question 1, $\overline{m_{a_{yray}}} = 4,12$.

 $m_{\text{year of study}}$ = mode value of that year of study

$$n_{a \text{ year of study}}$$
 = mean of that year of study

 m_{xxxxx} = mode value of the discipline and lecturer evaluated (code value)

$$m_{a \text{ xxxxx}}$$
 = mean of the discipline and lecturer evaluated (code value)



Fig. 3 Question 1 statistical analysis



Question 2 statistical analysis

For question 2 the mode of the subjects equals 4, which is lees than the average of modes from all subjects of that year for question 2, which is 5. Then the average of means from all subjects of that year of study, is 4.46, which is higher than the average of the subjects' answers for question 2 (4.06).

For question 8 the mode of the subjects is 5, the same as the average of modes from all subjects of that year for question 8. The average of means from all subjects of that year of study,(4.61) is closer to the average of the subjects' answers for question 8 (4.57).

For question 9 the mode value of the subjects is 4 and is less than the average of the modes from all subjects of that year for question 9. The mean value for the subject is higher than the average of means for that year of study.







Fig. 6 Question 9 statistical analysis

3 Conclusions

After analyzing these evaluation results, the lecturer can decide how his/her subjects can meet the students' needs better. The teaching staff evaluation will provide an effective feed-back for major improvements. Figure 3, 4 and 5 is presented in the results sheet for the entire questionnaire. This report is received by the evaluated lecturer in the next semester, after the exams have finished and the grading is over in order to avoid the distortion of the latter's grades. The results of the evaluation will be discussed with the head of the department. Each teacher's personal evaluation sheet is presented personally by the head of the department. We have tried to make it as comprehensive as possible in all the aspects resulted from the questionnaire statistical analysis. All the statistical support is offered by the analysis center.

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