# 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 the teaching staff of the second semester of academic year 2003/2004. The evaluation of subjects 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 to the accepted <br> scale | 0 | 1 | 2 | 3 | 4 | 5 |


| 1. | My professional knowledge has been significantly improved by <br> this subject. | $0 \%$ | $3 \%$ | $6 \%$ | $0 \%$ | $58 \%$ | $33 \%$ |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 2. | The volume of work was very high for this subject. | $0 \%$ | $3 \%$ | $3 \%$ | $6 \%$ | $39 \%$ | $48 \%$ |  |
| 3. | The theoretical aspect of the lecture was reinforced by the <br> laboratory, seminar and project activities. | $0 \%$ | $0 \%$ | $3 \%$ | $6 \%$ | $27 \%$ | $64 \%$ |  |
| 4. | The teaching method employed was a great help in understanding <br> the subject. | $0 \%$ | $0 \%$ | $0 \%$ | $6 \%$ | $33 \%$ | $61 \%$ |  |
| 5. | The bibliography was available. | $0 \%$ | $0 \%$ | $3 \%$ | $18 \%$ | $48 \%$ | $30 \%$ |  |
| 6. | The documentation that was distributed and/or the bibliography <br> was up-to-date, useful and of good quality. | $0 \%$ | $0 \%$ | $6 \%$ | $18 \%$ | $33 \%$ | $42 \%$ |  |
| 7. | Global evaluation of the discipline <br> (Grades from $\mathbf{1}$ to 10). | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ |
|  | $\mathbf{6} \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $3 \%$ | $6 \%$ | $9 \%$ |

## OBJECTIVE II. The students' opinion about the lecturer:

|  |  | Values according to the accepted scale |  |  |  |  | 0 | 1 | 2 | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8. | The lecturer proved an excellent grasp of the discipline he/she taught. |  |  |  |  |  | 3\% | 3\% | 0 | 0\% | 6\% | 88\% |
| 9. | The lecture was delivered in a clear and well-structured manner. |  |  |  |  |  | 3\% | 0\% | 3\% | 0\% | 24 | 70 |
| 10. | The lecturer stimulated the students' interest for the discipline. |  |  |  |  |  | 3 | 0\% | 0\% | 9\% | 48\% | 39\% |
| 11. | The lecturer readily agreed to discuss problems related to the discipline. |  |  |  |  |  | 3\% | 0\% | 3\% | 12\% | 30\% | 52\% |
| 12. | The time allotted to this discipline was efficiently used by the lecturer. |  |  |  |  |  | 3\% | 3\% | 3\% | 0\% | 36\% | 55\% |
| 13. | I would like to attend another of this professor's lectures. |  |  |  |  |  | 3 | 6\% | 12\% | 12\% | 12\% | 55\% |
| 14. | Global evaluation of the lecturer (Grades from 1 to 10). | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|  |  | 3\% | 0\% | 0\% | 0\% | 0\% | 0\% | 0\% | 6\% | 15\% | 9\% | 67\% |

OBJECTIVE III. The students' opinion about the lecturer's professional ethics.

| Values according to the accepted <br> scale |  | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 15. | Both the method of evaluation and the grading were correct. | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $33 \%$ | $67 \%$ |
| 16. | The exam was promoted only by professional criteria | $0 \%$ | $0 \%$ | $0 \%$ | $6 \%$ | $30 \%$ | $64 \%$ |
| $\mathbf{1 7 .}$ | The lecturer's attendance to the <br> lectures was: | No <br> answer | under 50\% | $\mathbf{5 0 - 7 5 \%}$ | $\mathbf{7 6 - 9 9 \%}$ | $\mathbf{1 0 0 \%}$ |  |
|  |  | $0 \%$ | $0 \%$ | $3 \%$ | $6 \%$ | $91 \%$ |  |
| $\mathbf{1 8 .}$ | The teachers' attendance to the <br> seminars, laboratories and projects <br> was: | No <br> answer | under 50\% |  |  |  |  |

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
- $\quad$ Some understanding please (NB class attendance 0 )
- It seems that he/she was fair


## CLASSIFYING QUESTIONS:

| 19. My final grade was | No <br> answer | Less than <br> $\mathbf{5}$ | $\mathbf{5 - 6}$ | $\mathbf{7 - 8}$ | $\mathbf{9 - 1 0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | $0 \%$ | $39 \%$ | $9 \%$ | $33 \%$ | $18 \%$ |
| 20. Please evaluate your knowledge in this <br> field | $0 \%$ | $27 \%$ | $18 \%$ | $36 \%$ | $18 \%$ |



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 $\bar{m}_{x x x x x}=4$, which is the same with the average of modes from all subjects of that year for question $1, \bar{m}_{\text {year }}=4$. Than the average of
$\underline{m e a n s}$ from all subjects of that year of study, $\overline{m_{a_{\text {year }}}}=4,04$, which is less than the average of the subjects' answers for question $1, \overline{m_{a_{\text {xuxx }}}}=4,12$.
$\bar{m}_{\text {year of study }}=$ mode value of that year of study
$\bar{m}_{\text {xxxxx }}=$ mode value of the discipline and lecturer evaluated (code value)
$\overline{m_{a}}$ year of study $=$ mean of that year of study
$m_{a} \times x x x=$ 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


Fig. 2
Mean values for all questions from the questionnaire in comparison with the mean values of the year

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$\bar{m}_{\text {year of study }}=$ mode value of that year of study
$m_{\mathrm{xxxx}}=$ mode value of the discipline and lecturer evaluated (code value)
$\overline{m_{a}}$ year of study $=$ mean of that year of study
$\bar{m}_{a \times x x x}=$ mean of the discipline and lecturer evaluated (code value)


Fig. 3
Question 1 statistical analysis


Fig. 4
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. 5
Question 8 statistical analysis


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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