

Process improvement with measurable data in higher education institution

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Agenda

- Introduction
 - Quality and quality management in higher education
 - TQM, process approach and data
- Purpose of research
 - Quality of educational processes are measurable
 - Results of the data analysis are useful for development of quality of education and for supervision of correctness of development decision too.
- Findings and implications
 - Results of our examples: relevant and useful tips for the leaders and professors, better experiences and results for the students.
 - Data and indicators determining the general education process are available as unused opportunities.

Introduction

- Higher education in Hungary:
 - momentous transformation since 1990
 - the public could no longer finance the total cost of the system
 - a new reform process: structural and financial reorganisation the system
 - reduced state financed places (state financed places decreased by 95% in fields of management and business administration)
 - growing competition among universities: greater focus on the value and the quality.

Introduction

- Quality in higher education
 - Higher education institutions are parts of the service industry and facing many competitive pressures they have to put greater emphasis on student satisfaction.
 - Two aspects of quality(Crombag, 1978):
 - effectiveness of education and
 - quality of graduated students.
 - It is unfortunate that higher education sector applies wrongly adopted QM systems.
 - Results of international institutions of higher education verify the necessity of quality management environment.

Introduction

- Quality in higher education
 - ENQA standards and guidelines
 - 1.7 creation and use of internal information and data
 - 1.8 providing information about operation
 - The principle of thinking in processes shall be interpreted in a different way in case of educational processes than for the typically administrative processes supporting education.
 - Making the practice of
 - assessment of processes from the partners' point of view;
 - performance assessment and continuous improvement general.

Practical Examples

Student satisfaction measurement of courses at BUTE



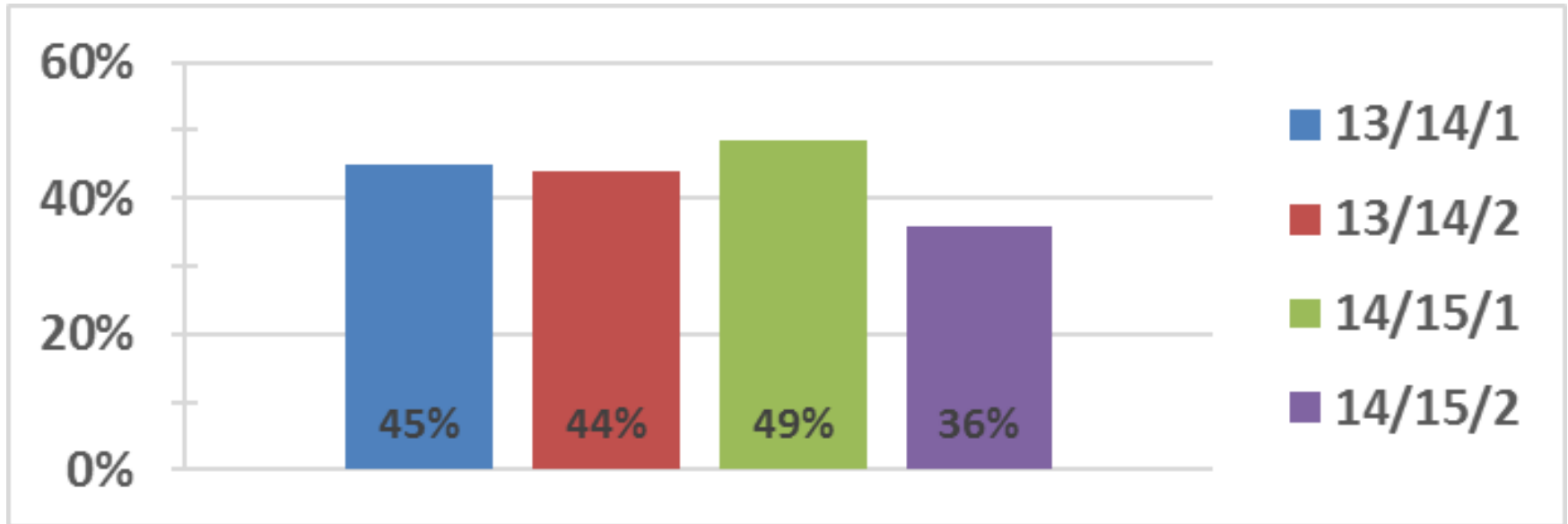
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Practical Examples

- Student satisfaction measurement of courses
 - Important element in the system of quality management of BUTE.
 - In case of lectures, the following obligatory questions shall be asked:
 - Q1. Please rate the quality of the lessons held by the lecturer below (please consider the following aspects: logical structure, captivating, easy to follow).
 - Q2. How suitable do you think the tests were for realistically assessing the knowledge learnt under this subject (please consider the following aspects: topics, questions, chosen method of examining)?
 - Q3. Please share your further comments regarding the lecturer.
 - Q4. Please assess to what extent the available resources and textbooks cover the topic of the subject and can be used to prepare for the exams.
 - Q5. Do you have any further comments regarding the subject, the exams or the faculty administration?
 - Q6. Please rate the subject with an overall mark.

Practical Examples

- Student satisfaction measurement of courses



Completion rate of questionnaires for each subject (FESS)

- The higher the completion rate of the survey, the deeper the trust of the lecturers in the operation of the system and the results.

Practical Examples

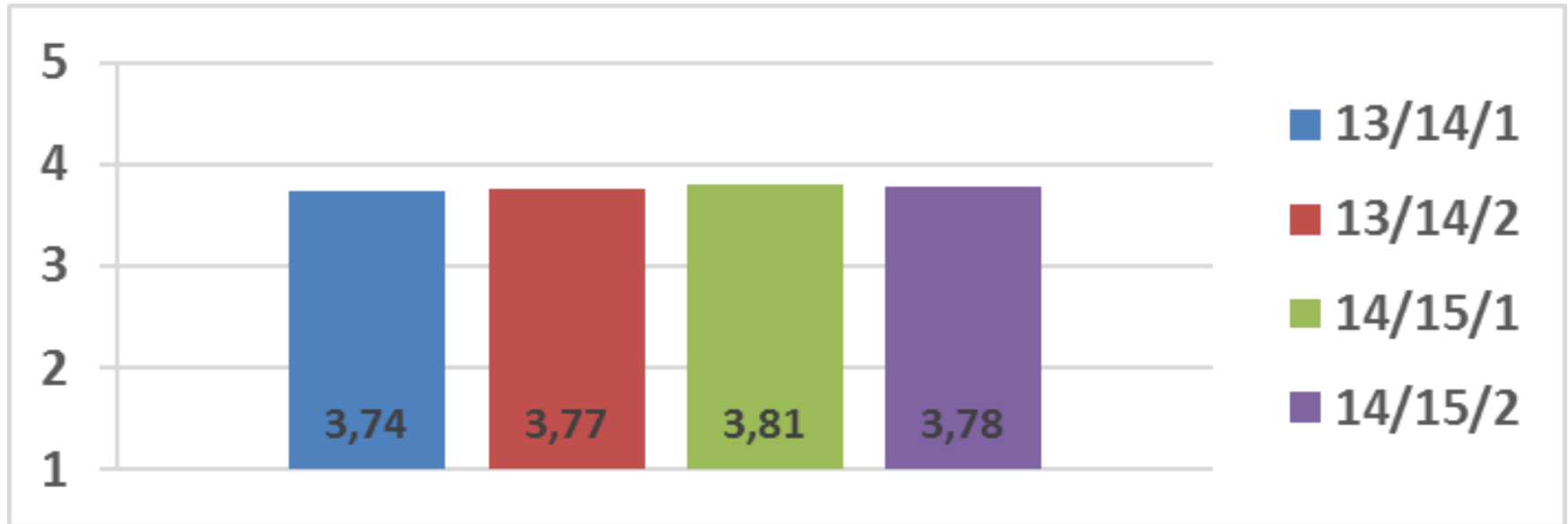
- Student satisfaction measurement of courses
 - New indicators: defined through the combined examination of results of questions.
 - Subject Quality Index (SQI):

$$SQI = \frac{Q1 * n_1 + Q6 * n_6}{N}$$

- Q1 and Q6 are the average values of questions 1 (lecturer) and 6 (subject) of the questionnaire
- n_1 and n_6 are the numbers of actual and valid respondents to questions 1 and 6 of the questionnaire ($N=n_1+n_6$)

Practical Examples

- Student satisfaction measurement of courses
 - Subject Quality Index (SQI):

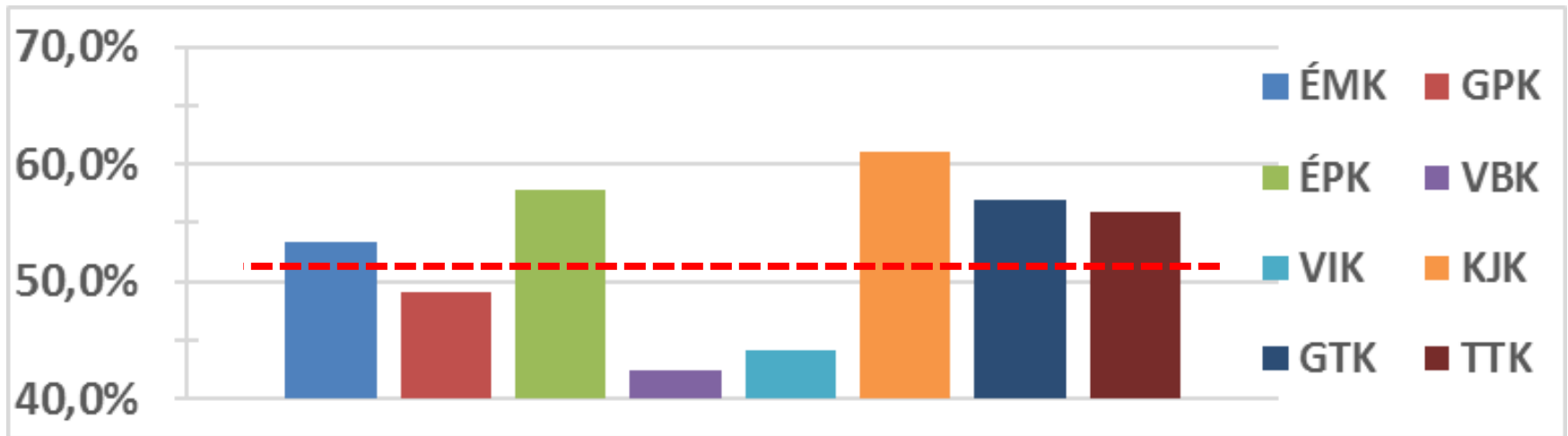


Subject average results at FESS

- Students usually give consistent ratings from semester to semester.

Practical Examples

- Student satisfaction measurement of courses
 - The multiple disciplines covered by the operation of the University is a good example for the statement that, the data can only be used with proper consideration.



The rate of lecturers showing an improving tendency in SSM survey results for the recent 6 semesters

Practical Examples

- Student satisfaction measurement of courses
 - The FESS Faculty Committee has decided to apply the results of the SSM survey in dividing the faculty budget among departments.
 - The result of the survey could entirely affect the departments' budget in the positive or negative direction.
 - The resources coming from education are divided based on the x credit value of students that is multiplied by the department/faculty SSM average value for the recent two semesters to determine the education performance value of each department.

Practical Examples

- Student satisfaction measurement of courses
 - In the master's programmes of the Institute of Business Studies not just a formal method of feedbacks of professors, but considered as to be factors of additional benefits of professors to their regular salary.
 - Counted classification (CC):

$$CC = 0.5 * \text{Education} + 0.25 * \text{Examination} + 0.25 * \text{Educational Material}$$

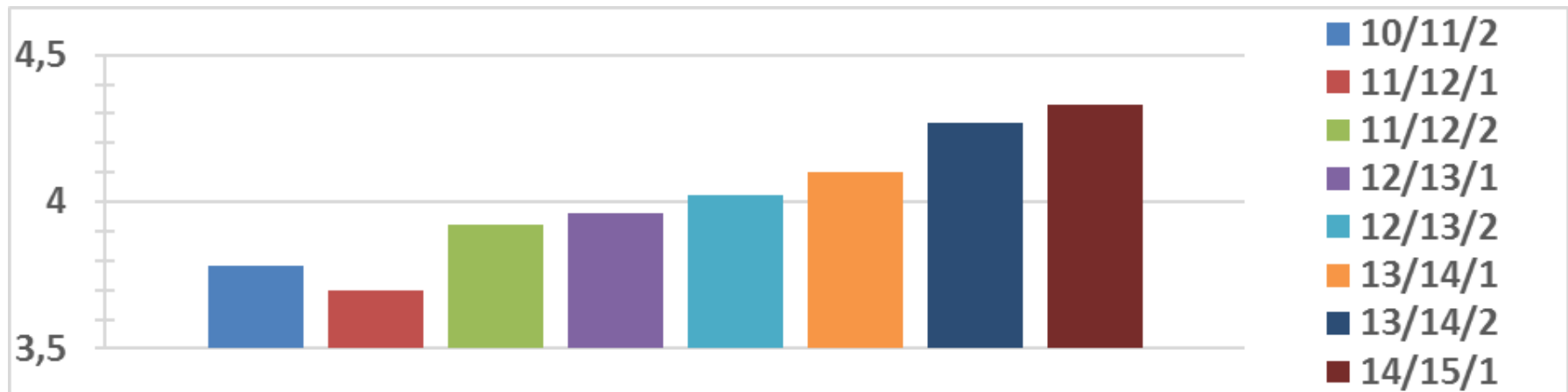
- Minimum classification values (MC) defined by the leadership of the faculty serve as base of calculating benefits.
- Algorithm of benefit:

$$\text{Sum} = (CC - MC) * \text{Number of students} * \text{Credit} * \text{Normative}$$

Practical Examples

- Student satisfaction measurement of courses
 - Counted classification (CC):

sem.	N	Mean	Std. Dev.	Min.	Max.
1.	58	4.11	0.51	2.78	4.97
2.	47	4.12	0.52	2.70	5.00
3.	52	4.11	0.48	2.61	4.93
4.	47	4.06	0.59	1.94	4.92
5.	60	4.13	0.46	3.00	5.00
6.	46	4.17	0.51	3.23	5.00



Ratings of a lecturer during eight semesters

Practical Examples

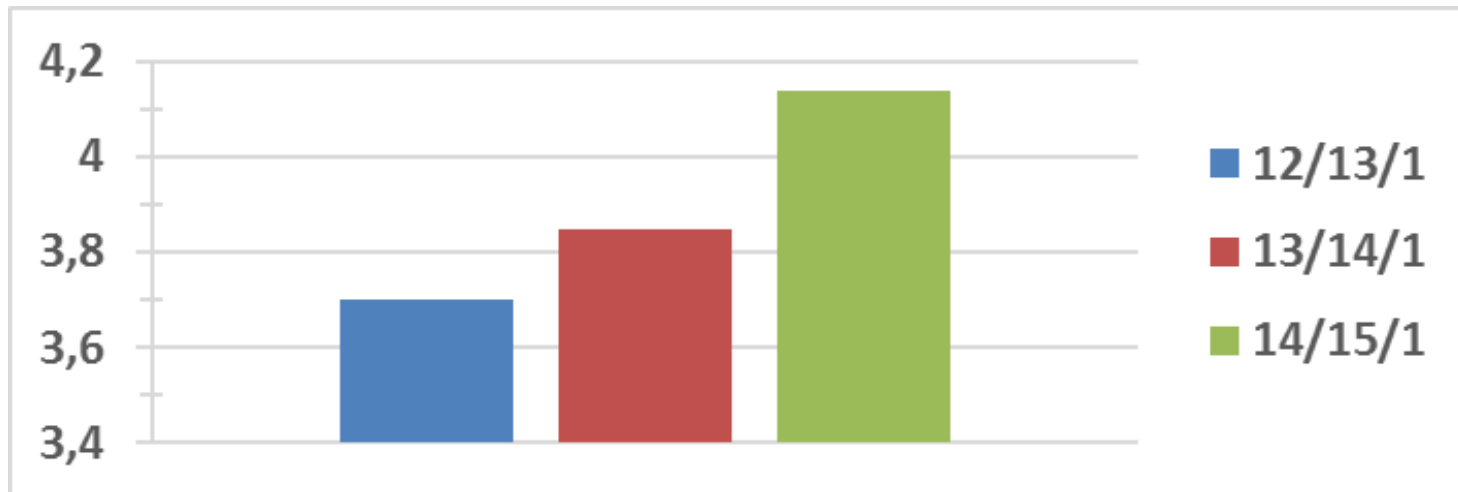
- Student satisfaction measurement of courses
 - Counted classification (CC):
 - Biggest changes:

previously	later	change
4,53	3,79	-0,74
4,74	4	-0,74
4,17	3,54	-0,63

previously	later	change
3,05	3,75	0,7
4,04	4,62	0,58
3,41	3,9	0,49

Practical Examples

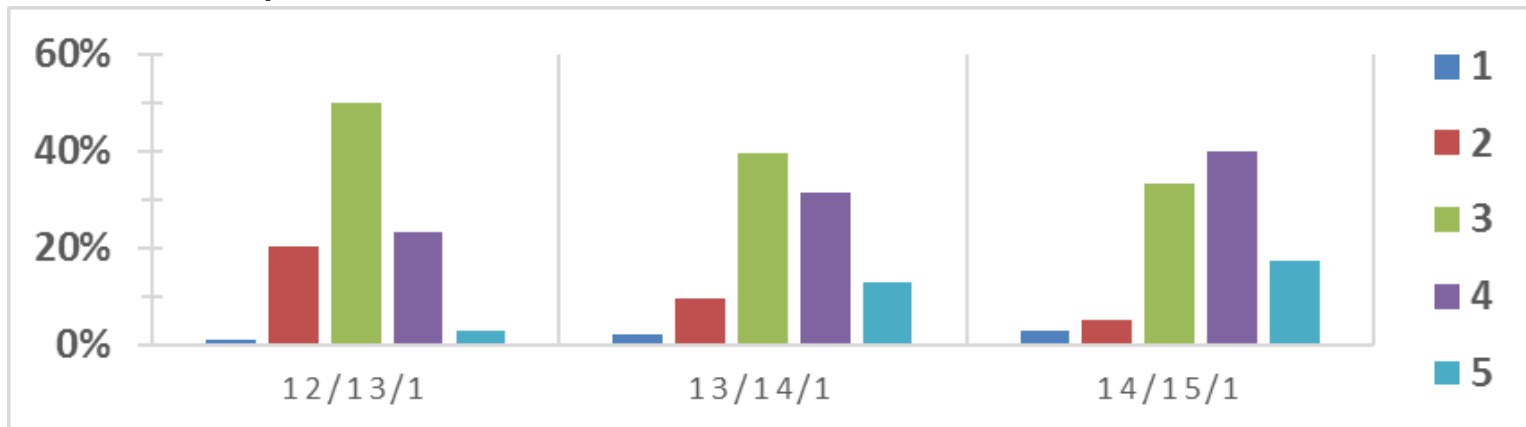
- Student satisfaction measurement of courses
 - Subject improvement:
 - Specific and deep study:
 - teaching and examining practical knowledge, solving problems in groups and the application of modern education resources



Results of the ratings of a specific subject

Practical Examples

- Student satisfaction measurement of courses
 - Subject improvement:
 - Specific and deep study:
 - „Significant change was achieved by dramatic reduction of requirements”?!



- The change in educational and examination methods (students were obliged to perform continuous practical work during the semester, thereby reducing the risk of dropout, and the rate of theoretical examination was also reduced in rating students' performance)

Managerial implications

- In higher education the systematic evaluation and analysis of data help the leaders of institutions in making proper decisions and also professors in evaluating and innovating their own activities.
- Spreading and applying of these approach are needed both for the management and the professors too! (at various levels of management of the institution)
- By improving the quality of education not only the students' satisfaction is increased but also the effectiveness of learning can increase, too.

Thank you for your attention!

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