# CUSTOMERS' SATISFACTION ANALYSIS USED AS INPUT DATA FOR THE MANAGERIAL DECISION-MAKING PROCESS IN TQM

Lecturer Ph.D. **Ana-Lăcrămioara LEON**[1], Professor **Ana-Maria LOGHIN**[2]

[1]Faculty of Industrial Design and Business Management, "Gheorghe Asachi" Technical University of Iasi, Iasi, Romania, [2]High School "Alexandru cel Bun", Botosani, Romania

**REZUMAT. Rezumat. Lucrarea propune o metodă de cercetare originală pentru analiza gradului de satisfacţie al elevilor (consideraţi clienţi). Rezultatele au stat la baza fundamentării deciziilor manageriale referitoare la asigurarea calităţii procesului educaţional: calitatea predării-evaluării, implicarea elevilor în activităţile extracurriculare, planificarea şi realizarea de programe educaţionale, scheme de învăţare prin muncă pentru elevi, sprijinirea parteneriatelor şi a proiectelor educaţionale, consiliere şi îndrumare în sprijinul tranziţiei de la şcoală la viaţa activă şi monitorizarea inserţiei tinerilor absolvenţi pe piaţa muncii.**

**Cuvinte chele:** decizie managerială, autoevaluare, satisfacţie clienţi, managementul calitătii.

**ABSTRACT. This paper aims to introduce an original research method for analyzing the students' satisfaction degree (considered to be customers for the institution). The results were used as input data for managerial decisions related to quality assurance of educational process: the quality of teaching and evaluation, students' involvement in extracurricular activities, planning and implementation of educational programs, learning through work, supporting partnerships and educational projects, mentoring students for the transition from school to an active life and graduates' insertion in the labor market.**

**Keywords:** managerial decision, self-evaluation, customers' satisfaction, TQM, development strategy.

## 1. INTRODUCTION

One of the main principles of TQM is the factual approach to decision making process which ensures both customers' satisfaction and overall improvement of the organization.

A manager plans, organizes, leads and controls the employees by executing decisions. He is called to decide about all problems, to evaluate situations, to consider alternatives, to make choices, to improve processes and services, to meet customers' expectations at the highest level and to think about the future /2, 6/. The entire decision-making process is depending on the available information.

Main issues that make the difference between managerial decision and personal decision are:

▸ managerial decision involves the manager who takes the decision and one or more people from the organization (workers, head of the departments, customers, stakeholders, etc.) that is why the complexity is greater than personal decision;

▸ managerial decision determines changes inside groups which are observed in their behaviour, mood, actions and results, so the leader must take into consideration the characteristics of jobs, interests, motivation, qualification and potential of each individual from any group.

Managers take decisions that may affect short-term or long-term development of the entire company. To create such objectives it is very important to analyse the internal and external context of the organization - ISO 9001:2015, clause 4. Depending on the degree of knowledge of the, managers can act in well-known conditions, uncertain conditions and risk conditions /1/.

In the *Quality Management Systems* it is a common method to perform an annual self-evaluation of the entire organization based on certain criteria. The present research of the students' satisfaction degree was carried out at the *High School "Alexandru cel Bun" from Botosani*. The results were used as input data for managerial decision-making related to the educational process: the quality of teaching and evaluation, students' involvement in extracurricular activities, planning and implementation of educational programs, learning through work, supporting partnerships and educational projects, mentoring students for the transition from school to an active life and graduates' insertion in the labour market /1, 2, 3/. Must be mentioned that the self-evaluation procedure is focused on planning strategies for continuous improvement, integration of professional and technical education rules, and setting deadlines for

the main activities contained in *The Action Plan of the School* /4, 5/.

## 2. METHODOLOGY OF RESEARCH

The study of students' satisfaction degree is part of the annual self-evaluation which took place in the high school during the year 2016-2017. Responsible for step-by-step planning of the evaluation is C.E.A.C. (Commission for Evaluation & Quality Assurance). *Administration Council* has the responsibility for final analysis of all results and decision-making process.

The questionnaire-based survey is a quantitative method used in the applied research. The questionnaire is a tool for gathering information, in this case it contains closed items (the different variants of replies are given) because it is known that students find this way easier to understand and choose more quickly the favourite option. Also there are open items in the questionnaire which let the student to freely express his/her ideas concerning the topics. The questionnaire was designed by C.E.A.C. members in collaboration with the psychologist, based on A.R.A.C.I.P. recommendations /5/. It was used the paper-and-pencil questionnaire administration.

For this paper, only 4 criteria and 12 questions from the total of 41 (used for annual evaluation) were considered. This methodology is new because the usual procedure doesn't use criteria for grouping items, processing data and drawing conclusions.

The distribution of items on each criterion is the following (it is shown in **Table 1**):

▶ Criterion 1: communication with school personnel - items 1, 4, 5 and 6;

▶ Criterion 2: students' security - items 7, 8 and 9;

▶ Criterion 3: improvement of learning conditions - 2, 3 and 10;

▶ Criterion 4: satisfaction related to individual help and explanations - items 11 and 12.

The total number of students who participated at the survey was 160; they were enrolled at three study programs: professional training program (encoded P), high school (encoded L) and secondary studies after high school graduation (encoded PL).

Each student was asked either to choose from variants or give from 1 point (I strongly disagree) to 5 points (I strongly agree) to every item, depending on his/her opinion. All data recorded for each criterion were statistically processed by using *Microsoft Excel*. The obtained points were assimilated as following: 5 points - extremely satisfied (ES), 4 points - very satisfied (FS), 3 points - satisfied (S), 2 points - quite satisfied (DS) and 1 point - unsatisfied (NS). In the graphs these codes

are present for a better and faster visualization of the results.

*Table 1.* **Distribution of items on four criteria of evaluation**

| Criterion | Items from questionnaire |
|---|---|
| Communication with school personnel | 1. When you notice a negative issue and you tell the Director or your Professor about it, which are the effects of communication with school? |
| | 4. How do you communicate with your class master / tutor when you have personal problems? |
| | 5. How often do you communicate with your class master / tutor about your personal problems? |
| | 6. How do you communicate with the Director or other employee when you have personal problems? |
| Security | 7. Do you feel safe inside the school? |
| | 8. Do you feel safe in other spaces of the school (gym, workshops, yard)? |
| | 9. Do you feel safe nearby the school (the road to and from the school included)? |
| Improvement of learning conditions | 2. In the past year did you make proposals for improvement for activities taking place in the school? |
| | 3. If you replied YES at the previous question, what happened with your most recent proposal? |
| | 10. How do you appreciate the improvement of installing new computers during this year compared with the last year? |
| Satisfaction related to individual help & explanations | 11. How do the professors reply at your help requests concerning understanding or gathering more details related to a taught subject? |
| | 12. Do you get explanations about the reasons you have obtained a certain mark / qualificative? |

## 3. RESULTS AND INTERPRETATIONS

It must be mentioned that the data gathered through the real self-evaluation conducted between 2016-2017 were not processed in the manner below. It is a proposal to group all items into 7 to 10 criteria of appreciation for students' satisfaction degree and to change the present procedure regarding the way how the results are shown.
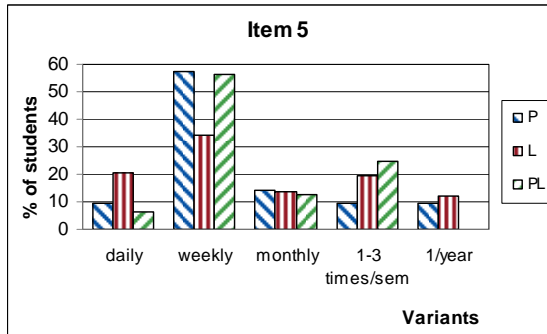
In this paper are analysed only four criteria. The figures 1-4 present the graphs for each item from every criterion of evaluation. On the ordinate it is placed the percentage (%) of students and on the abscissa it is set the degree of satisfaction or the variants from which students can choose.
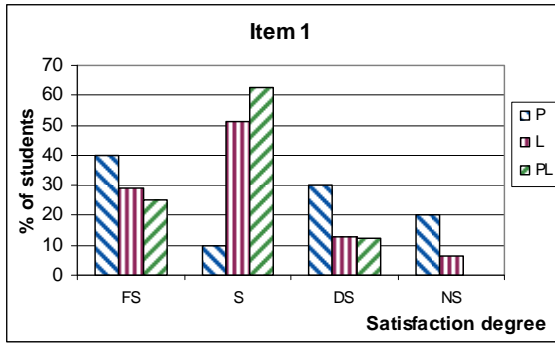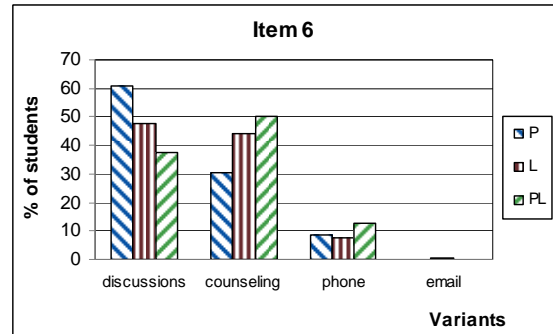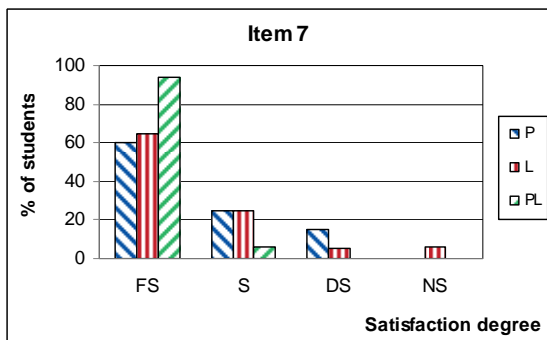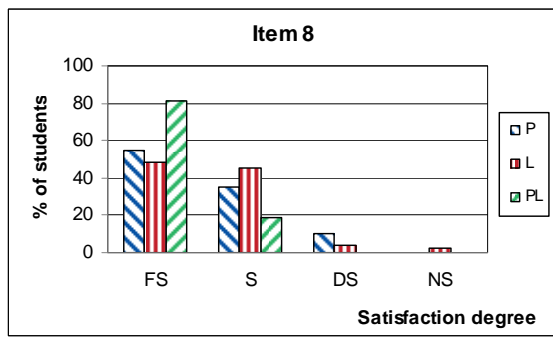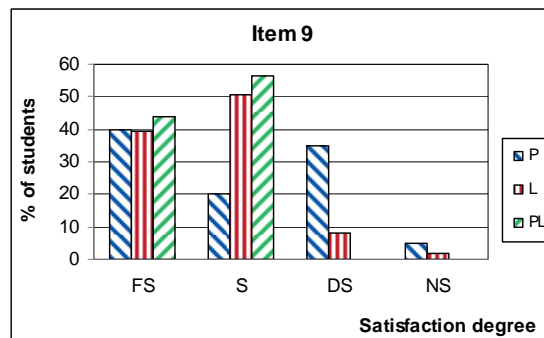
1a
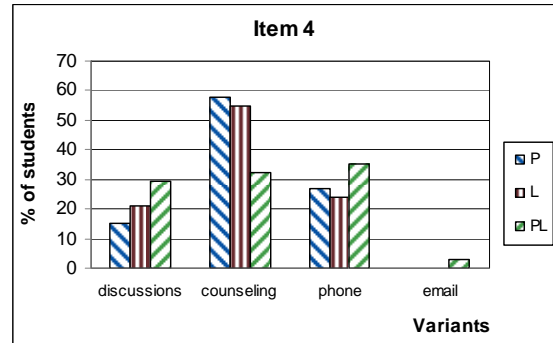


1b



1c



1d

**Fig. 1. a,b,c,d** Results obtained at the 1st criterion - communication with school personnel



2a



2b



2c

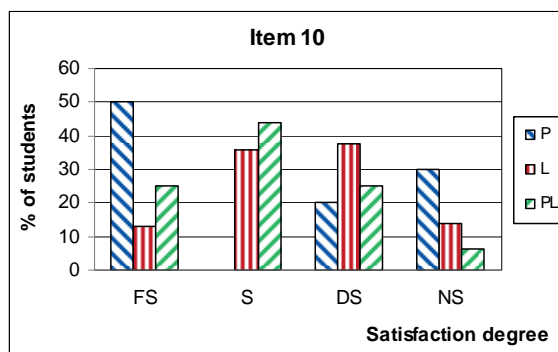**Fig. 2. a,b,c.** Results obtained at the 2nd criterion - security.
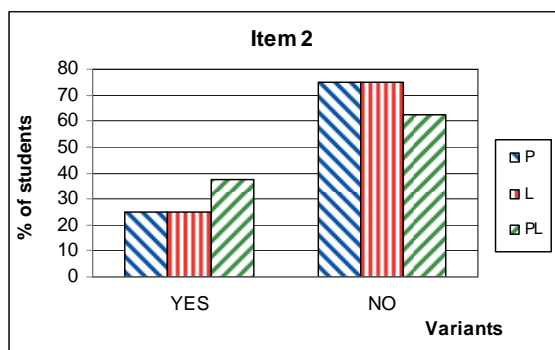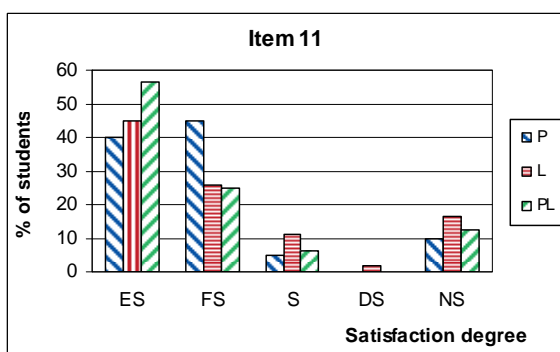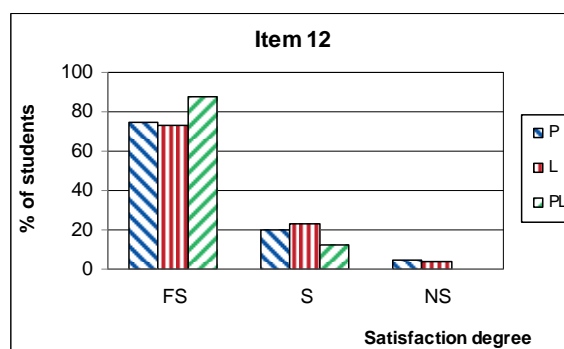
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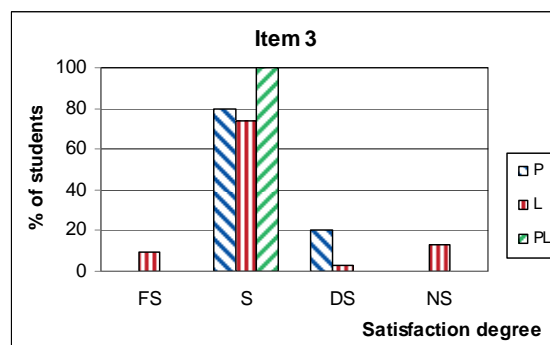


3b



3c

**Fig. 3.a,b,c.** Results obtained at the 3rd criterion - improvements of learning conditions



4a



4b

**Fig. 4.a,b** Results obtained at the 4th criterion - individual help and explanations

## 3.1. Interpretation of the results

- **Criterion 1** - communication with school: the majority of students from all three levels of study (P, L and PL) are very satisfied and satisfied with the way there are solved negative issues (Figure 1a), the communication with tutor / class master is achieved mostly by counseling and phone (Figure 1b), the contact with tutor is weekly done (Figure 1c) and the direct communication with employees is preferred (Figure 1d);

- **Criterion 2** - students' security: it is noticed that more than 60% of students are very satisfied with the security inside the school (Figure 2a), more than 69% of students are very satisfied with the security in the auxiliary spaces (Figure 2b) and over 39% of them are very satisfied with the security nearby the school (Figure 2c);

- **Criterion 3** - improvement of learning conditions: this study shows that usually students don't give ideas and proposals of improvement, the proportion of those who replied "NO" at item 2 is greater between 2 and 3 times than the proportion of students who replied "YES" (Figure 3a). The majority of respondents who came with ideas are

satisfied with the effects that followed. As for installing new computers in the classrooms, it is observed an increasing of the satisfaction degree, 50% of "P" students are very content, 36% of "L" students are satisfied and 44% of "PL" students are satisfied too;

– **Criterion 4** - individual help: at least 40% of "L" and "PL" students were extremely pleased because all professors replied to their requests, and 45% of "P" students declared themselves very satisfied. The results obtained at item 12 show that at least 73% of students from all 3 levels of studies were very satisfied with explaining the reasons for receiving a certain mark or qualification.

## 4. CONCLUSIONS

The analysis of students' satisfaction from three different study programs - P, L and PL - was achieved by an original method (a distribution of questionnaire items by several criteria, followed by a statistical processing) that is not applied at the *High School "Alexandru cel Bun" from Botosani,* but will be proposed to be used in the next annual self-evaluation. This method will be included in the *Best practices manual*.

The results obtained by the survey show some strengths and weaknesses of the school. For example, the direct communication between students and their tutor / class master must increase its frequency from weekly to daily (item 5). Another topic of interest for top management is related to ways of improving the proposal process, only 70% of students being actively involved in it.

These conclusions consist the starting point for the managerial decision-making in order to plan the future development strategy and quality improving measures for the educational process.

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## About the authors

Lecturer Ph.D. Eng. **Ana Lacramioara LEON**
"Gheorghe Asachi" Technical University of Iasi, Iasi, Romania

Graduated from "Gheorghe Asachi" Technical University of Iasi (1987), doctoral degree in the field of Textile Mechanical Technologies (1999). Competences in the area of Total Quality Management, Quality Assurance, Quality Control, Applied Statistics, Organizational Communication, Nanotechnologies, Medical Textiles and Creativity & Innovation. Team member in 17 research projects since 1990. Author and co-author of 15 books, 4 ISI indexed papers, 14 papers published in Data Based indexed journals and 8 papers in ISI Proceedings of international conferences.

General Manager, Professor **Ana Maria LOGHIN**
High School "Alexandru cel Bun" Botosani, Romania

Graduated from "Alexandru Ioan Cuza" University of Iasi (1997), Romanian Language and Literature Specialization, master degree at "Gheorghe Asachi" Technical University from Iasi, "Quality Assurance in the Textiles & Leather Goods Domain" Specialization (2018). Competences in: Romanian Language and Literature, Total Quality Management, Quality Assurance in education, Educational Planning, Educational Projects, Continuous Learning, Management (since 2013 General Manager and member in the Administration Council at the High School "Alexandru cel Bun" Botosani).