WHAT ARE THE EXPECTATIONS OF STUDENTS IN THE ERA OF THE INFORMATION SOCIETY

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Abstract

In this contribution the results of analysis of students interests and opinions have been elaborated. Input data are gained from the individual years of study at the faculty of Manufacturing Technologies in Prešov and are processed by means of electronic questionnaire.

The investigation has been oriented on the particular subjects and individual needs of study. Elaborated results could be used in designing of structure and professional orientation of the education.

Key words: means, questionnaire, individual needs, professional orientation

JEL Code: A31, C14 , Z13

Introduction

In this contribution we would like to deal with some aspects of students from the point of view of their interests, how to divide their time into particular activities. The key technologies in present and future time will be that of information technologies, which are based on electronic and optical principles. These technologies influence the process of education and life of individuals, different groups, organizations and the whole present and future society, this influence is very important in the process of education and brings out different possibilities. At the some time it increases aspiration on everyone who participates in these activities. Who else if not the student community should be the indicator of the future ?
By means of the questionnaire we would like to investigate how the students appreciate it.

1 Information assumption for analysis

Individual items are accessible, but other parts are changeless and inaccessible for the operator and cannot be manipulated every item is in fact a small menu we eau choose the

necessary information from, we can do entries by means of about subjects and particular subject is considered from different points of view. In our case we monitoring a subjects and particular subjects has different number of variants, some of then could by expressed by real numbers. [1]

What are the questions about you can see in the introduction part of the questionnaire (picture 1). The possibilities of questions selection could be seen at picture 2.

Every respondent opening could express his opinion regarding every subject. The whole number of subject at our faculty are 97 compulsory subjects and 99 optional subjects of study. During the first stage 44 questionnaires have been filed in.

By storing of completed forms into the memory the data processing begins. Output values contents also unnecessary parts which are later filtered and data concerning particular subjects are sorted according to the common features. [7]

Fig. 1: Questionnaire - introduction

Subject	Direct instruction actual		Direct teaching proposed						Evaluation quality teaching			Evaluation content teaching		
Course	L.	E.	Lectures			Exercises								
			Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max
Mathematics I	3	4	0	2.6	4	2	3.8	6	20	30	60	30	60	70
Mathematics II	3	4	2	2.7	4	2	3.6	6			70	20	60	80
Mathematics III	3	3	2	2.8	4	2	3	4			100	0	10	50
Physics I	2	2	1	2.1	4	0	2.3	12			80	10	10	100
Physics II	1	2	0	1.5	3	1	2	3			10	20	60	80
Construct. Geometry	2	2	2	2.1	3	2	2.4	4			80	10	10	100
Techn. Document. I	2	3	1	2	3	1	2.4	4			60	0	10	80
Techn. Document. II	2	2	1	2	3	1	2.3	3			10	20	60	80
Program. Languages	1	2	0	1.3	3	2	2.5	5			80	10	10	10
Sociology	1	1	0	1	2	0	1.1	2			80	0	10	100
Basic. psychology	0	2	0	0.3	3	1	2	3			10	20	60	80
Numerical Math.	1	2	0	1.4	3	1	2	3			92	50	76	95
Strength of Materials	3	3	2	2.6	4	2	3	4	70	83	100	70	85	95

0
10
20
30
40
50
60
70
80
90
100

- *Enquiry for Education for global information society in the next decennary. The survey distribution, assignment students time during lessons and in personal part. The results will be used to draft changes: content, form, and quality teaching. It also will help in the design of infrastructure school facilities, laboratories, cabinets and orientation in teaching in different areas.*
- *I devote as much time preparing the individual disciplines expressed in units of time. I will make in next table.*

Concentrated data contain values which are erroneous. It means that individuals who made such the entry are very different from conventional community. To consider these data we use one of the statistic tests for example: Dixon's test or Grubbs's test.

1.1 Why do we use the electronic form of the questionnaire ?

The main reason we choose the electronic form of research are the advantages during processing, easy distribution of forms, the possibility to make changes without scratches.

The main criteria are:

- the level of probability of truthful answers
- you - generation answers in the conditions which are very close to the future information community

We'll explain the first condition, which is the result of the previous investigations.

Unfortunately they were realized by classical paper and by means of interview and also by means of electronic forms. The results of all the forms were similar in tendencies but there were differences, which are not explained yet. We have to apply another methods to answer these questions. The cardinal analyzed phenomenon was the category of honesty:

At one side:

- acquaintance individual
- name-less individual
- mini society
- anonymous society
- big society

About another faction:

- several persons commission constitution forth acquaintance persons
- several persons commission constitution forth name-less persons
- little commission (2 -3 membership)

- individual acquaintance, intimate
- individual name-less, foreign

- classical papery questionnaire non-anonymous
- classical cardboard questionnaire anonymous
- electronically (machine-made) questionnaire non-anonymous
- electronically (machine-made) questionnaire anonymous [10]

Note 1 All the forms were analyzed by means of scratching, the answers - verbal and numerical.

Note 2 Another effect for level honesty was analyzed from the time aspect. When dealing with the paper form you should take into consideration avalanche effect and mass psychology effect.

Note 3 Investigation has been realized by system with each at right side and left - hand, although we were interested in the left first pair.[11]

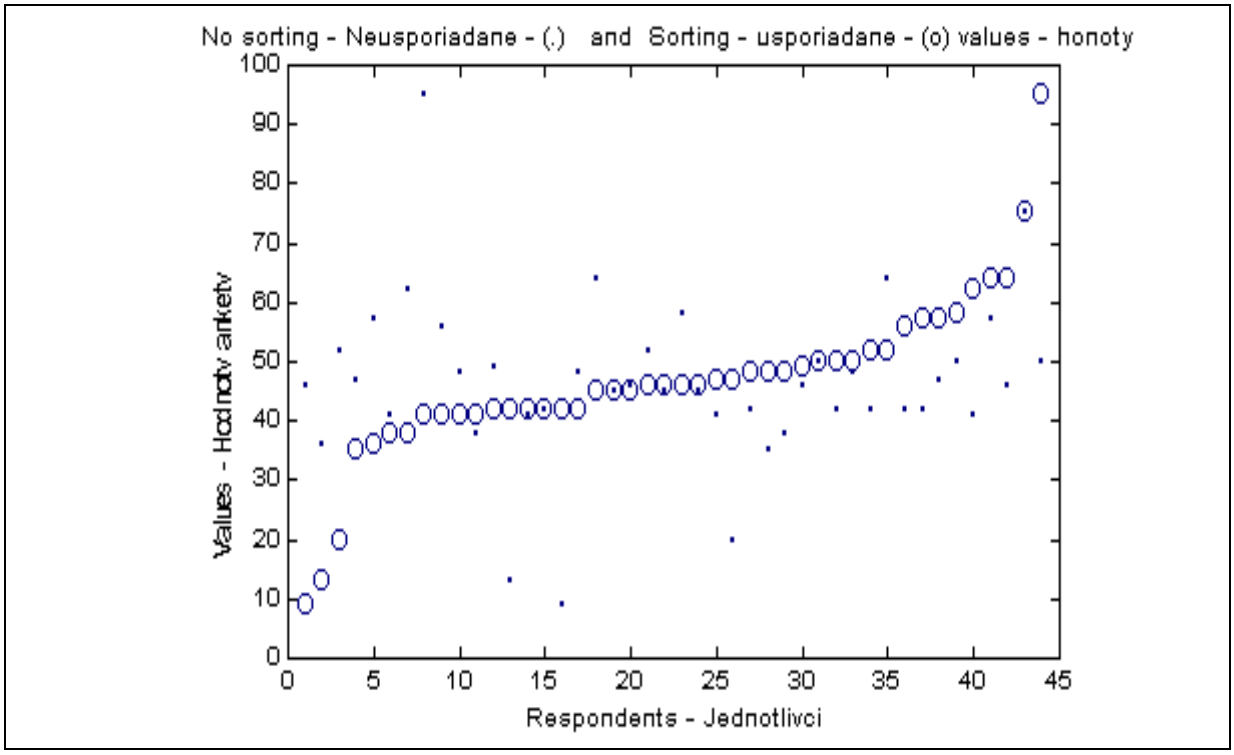
Fig. 2: Example of random field questionnaire

Subject	Direct instruction actual		Direct teaching proposed						Evaluation quality teaching			Evaluation content teaching			
Course	L.	E.	Lectures			Exercises									
			Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	
Mathematics I	3	4	0	2.6	4	2	3.8	6	20	30	60			60	70
Mathematics II	3	4	2	2.7	4	2	3.6	6	40					60	80
Mathematics III	3	3	2	2.8	4	2	3	4	0					10	50
Physics I	2	2	1	2.1	4	0	2.3	12	20					10	100
Physics II	1	2	0	1.5	3	1	2	3	10					60	80
Construct. Geometry	2	2	2	2.1	3	2	2.4	4	20					10	100
Techn. Document. I	2	3	1	2	3	1	2.4	4	0					10	80
Techn. Document. II	2	2	1	2	3	1	2.3	3	10					60	80
Program. Languages	1	2	0	1.3	3	2	2.5	5	30					10	10
Sociology	1	1	0	1	2	0	1.1	2	20					10	100
Basic. psychology	0	2	0	0.3	3	1	2	3	10					60	80
Numerical Math.	1	2	0	1.4	3	1	2	3	50					76	95
Strength of Materials	3	3	2	2.6	4	2	3	4	70	83	100	70	85	95	

0
20
30
50
60
70
80
90
100
I don't know
Without result

This information influenced the selection of form of the research. The honesty of individual, which we are interested in, is the highest in case: individual versus machine (equipment, program). The lower level is observed when individual chooses from the given answers. The lowest level of honesty is numeric form when facing of several persons which consists of relatives and authorities. The least honest is interview or the case of yes - no questions. [9]

Fig. 3: Illustrated example out - of the way values from analysis



1.2 Results of the analysis

The results are shown in the chart

Tab. 1: Table of some selected values for some selected courses from the analysis

Subject / Course	Direct instruction actual		Direct teaching proposed						Evaluation quality teaching			Evaluation content teaching			
	L.	E.	Lectures			Exercises									
			Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	
Mathematics I	3	4	0	2.6	4	2	3.8	6	48	67	92	50	73	95	

Mathematics II	3	4	2	2.7	4	2	3.6	6	4	59	90	20	65	90	
Mathematics III	3	3	2	2.8	4	2	3	4	20	72	100	30	76	95	
Physics I	2	2	1	2.1	4	0	2.3	12	15	66	100	60	82	100	
Physics II	1	2	0	1.5	3	1	2	3	25	73	100	40	80	100	
Construct. Geometry	2	2	2	2.1	3	2	2.4	4	40	66	95	20	73	95	
Techn. Document. I	2	3	1	2	3	1	2.4	4	15	65	100	40	74	100	
Techn. Document. II	2	2	1	2	3	1	2.3	3	10	67	100	30	71	95	
Program. Languages	1	2	0	1.3	3	2	2.5	5	5	60	100	20	63	95	
Sociology	1	1	0	1	2	0	1.1	2	0	59	100	0	61	100	
Basic. psychology	0	2	0	0.3	3	1	2	3	30	81	95	70	89	100	
Numerical Math.	1	2	0	1.4	3	1	2	3	50	71	92	50	76	95	
Strength of Materials	3	3	2	2.6	4	2	3	4	70	83	100	70	85	95	
Computer Graphics	0	2	0	0	0	2	2.02	3	65	85	100	65	85	100	
World Language	0	2	0	0.09	2	1	2.1	6	40	80	100	40	82	100	
Text Editors	0	2	0	0.1	2	2	2.1	3	20	75	100	20	77	100	
Environ. Toxicology	2	0	2	2	2	0	0	0	50	75	95	50	78	95	
Statistics	2	2	2	2	2	2	2	2	80	85	90	80	85	90	
Control Theory	2	0	2	2	3	0	0.5	2	75	80	90	85	90	100	
Part of the Machine	3	2	3	3	3	2	2	2	80	85	89	80	86	90	
Tech. Changes Shape	4	2	2	2.5	3	2	2	2	70	80	92	70	80	100	
Fluid Mechanics	3	3	2	2	2	2	2	2	70	76	95	70	74	85	
Thermodynamics	2	2	2	2	2	2	2	2	70	76	85	70	75	85	
Mat. Comb. &Divide	2	2	2	2	2	2	2	2	70	78	90	65	78	90	
Basic of jurisprudence	0	2	0	0.3	1	1	1	2	36	55	75	25	52	75	
Intro. to Ecology	2	1	1	1	1	1	1.6	3	5	40	75	5	38	75	
Semester Project	0	3	0	0	0	3	3.7	10	50	77	98	50	77	99	
Analysis of tensions	0	2	0	0	0	2	2.7	3	30	61	85	35	65	96	
Drives of Machines	2	0	2	2	2	0	0	0	40	56	65	40	51	65	
Mounting technology	2	2	2	2	2	2	2	2	70	73	82	70	74	88	
Microelectronics	0	2	0	0	0	2	2	2	50	67	80	43	65	80	
Business Law	0	2	0	0	0	1	2	3	55	65	70	55	65	70	

In the further analysis we'll focus our attention to particular subjects. Our faculty uses the credit system in all years of study. The question is how to divide points during the semester in subjects finished by exam or credit. The amount of points in subjects finished by exam should be minimal during the semester. Students should gain points mainly during the exam (either

written or oral). However in subjects finished by credit should be concentrated during the semester. This point wasn't analyzed that is why there are no results.

Conclusion

The results of the investigation cannot be considered as a recommended structure at our faculty. The results can show how mature students are and what do they consider as more important. We'll continue to process the results of the research my mans of machines (computers). This kind of education was very popular in the sixtieth. Nowadays in the information society the methods of electronic education is going to be more important.

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