

## PROCESS OF STUDIES EVALUATED BY STUDENTS

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**Abstract.** The research is based on enquiries among students of the Faculty of Engineering, Latvia University of Agriculture with the aim to get their evaluation of the process of studies. In Latvia during the last six years the number of students has decreased by 20.8 %, but at the Faculty of Engineering, Latvia University of Agriculture in the sphere of engineering sciences the number of students has practically not changed in full-time studies. Also in the next three years the number of students will decrease as the number of the graduates from secondary education establishments will decrease. In the education theme group Engineering, Manufacturing and Construction there are 13 % of students in Latvia. The students have chosen their studies based on the stable interest in machinery, family traditions, suggestions of elder friends and acquaintances that result in the prestige of the program and education. In the enquiries the students have positively evaluated the content of studies, organization and management of studies. They evaluate also optimistically their possibilities to get a well paid job in the chosen specialty.

**Keywords:** studies, students, study program, teacher, study process.

### Introduction

From 1994/1995 to 2005/2006 study years the number of students in Latvia continuously increased, but since the academic year 2006/2007 the number of students has decreased (Fig. 1, [1; 2]). It is related with the demographic situation as the number of young people of the corresponding age decreases. In general education establishments the number of students in the academic year 2010/2011 in comparison to 200/2001 has decreased by 37.3 % [3], but in Professional education institutions the decrease is 26.4 % [4].

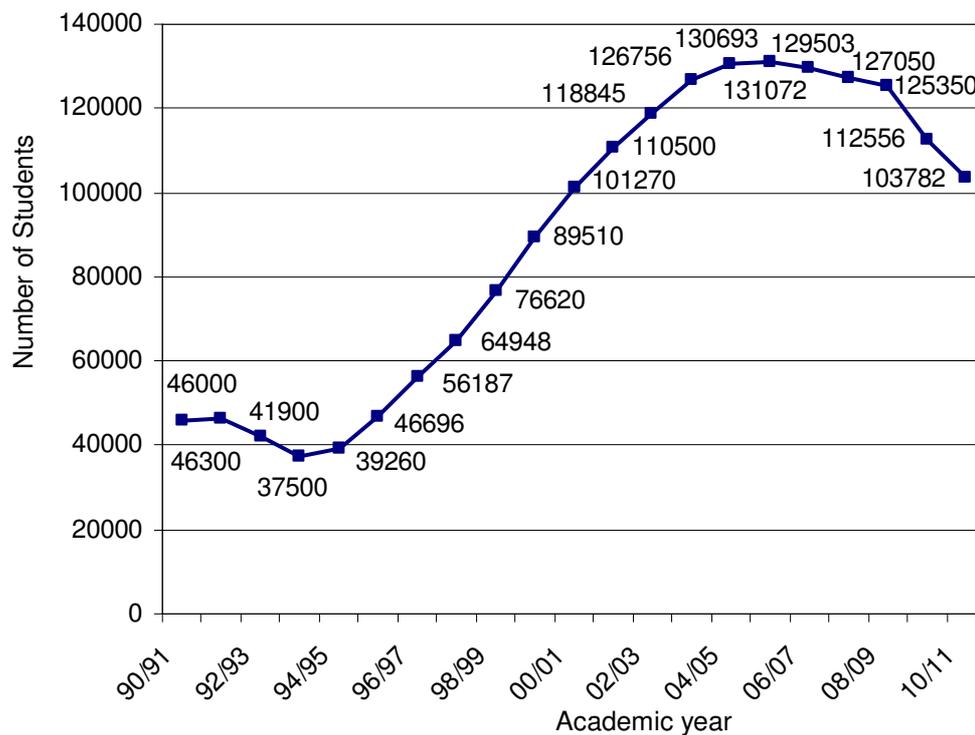


Fig. 1. Changes of number of students in Latvia

At the beginning of the academic year 2010/2011 in total at professional education institutions there were 35 767 students, incl. in the 1st year – 11 478, 2nd year – 8 252, 3rd year – 9 318 and 4th year – 6 719 students [3].

In turn, in general education study programs at the beginning of the academic year 2010/2011 there were 216 307 students. The distribution of the number of students at secondary school is shown

in Fig. 2 [3]. The number of students in the last three grades shows that in the two future years the number of graduates from secondary schools will still decrease. With this also the number of potential students will continue to decrease.

As it can be seen in Fig. 3 [2] in Latvia still the highest proportion of students is in the sphere of social sciences, commerce and law (48 %). Engineering sciences, production and construction spheres are studied by 13 % of students.

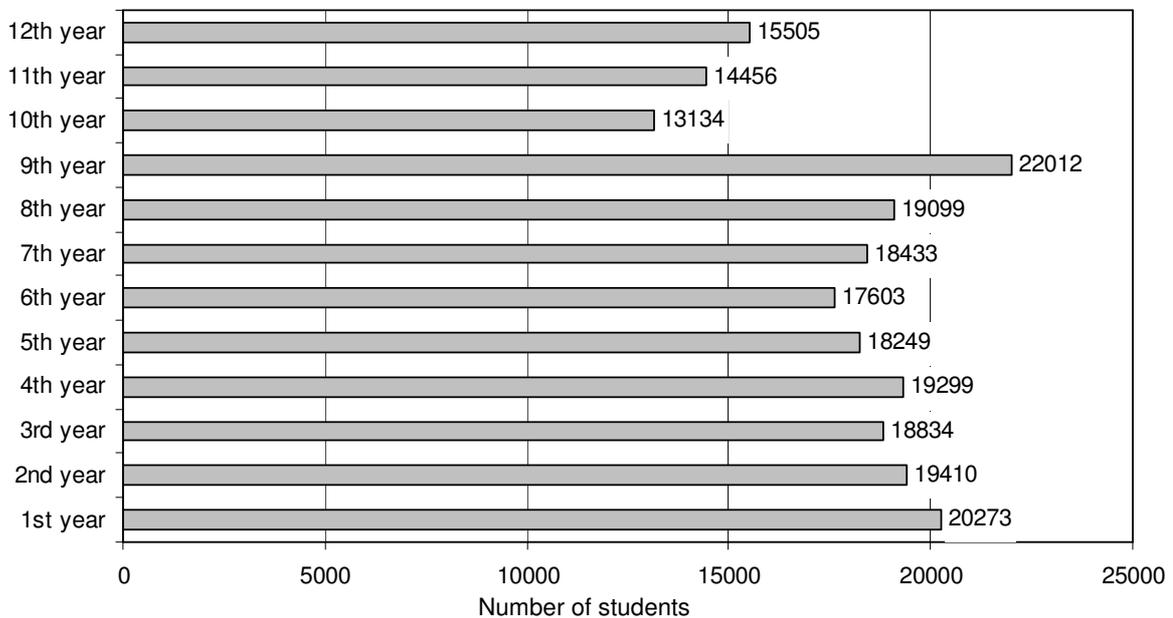


Fig. 2. Distribution of students in secondary general education programs at the beginning of academic year 2010/2011

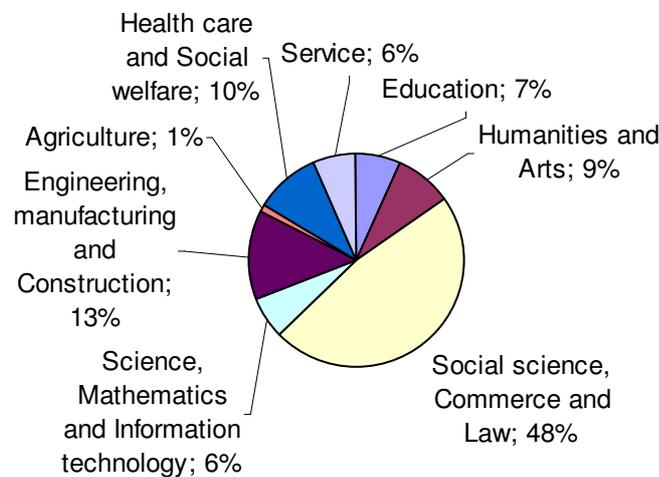


Fig. 3. Distribution of students in educational theme groups in academic year 2010/2011

### Materials and methods

At the Faculty of Engineering of the Latvia University of Agriculture there are three engineering study programs: Agricultural Engineering (in transformed form exists since 1944), Agricultural Power Engineering (1989) and Machine Design and Manufacturing (2005). The number of students enrolled in the last eight years can be seen in Table 1. The table shows that in full-time studies in all engineering programs the total number of students has not changed essentially, but in part-time studies the number of enrolled students has reduced three times.

Table 1

**Number of enrolled students in study programs by years**

Study program	2003	2004	2005	2006	2007	2008	2009	2010
Agricultural Engineering	94/31*	78/53	92/34	68/38	67/30	66/19	92/12	76/7
Agricultural Power Engineering	28/38	19/52	21/39	27/32	24/27	23/23	40/9	26/7
Machine Design and Manufacturing	-	-	-	33/11	23/11	29/9	31/6	25/11
Total:	122/69	97/105	113/73	128/81	114/68	118/51	163/27	127/25

\* – above the line full-time studies, under the line – part-time studies.

The research is based on enquiries among the students of engineering programs at the faculty. The first, second and fourth year students are enquired. The aims of the enquiries have been different. The first year students were enquired in the first semester with the aim to state the argumentation for choosing the study program, evaluation of the registration for the studies and the first impressions in studies. The second year students were enquired with the aim to get their impressions in the first study year. The fourth year students were enquired after the defense of the Bachelor thesis with the aim to get their evaluation on the study program and the process of studies in total.

**Results and discussion**

In December, 2009 124 first year students of the study programs mentioned in Table 1 were enquired. 83.8 % acknowledged that their opinion about the choice of the study program had not changed, 10.6 % could not express their attitude unequivocally, 4.0 % said that the attitude had changed in favour to the chosen program, but 1.6 % (two students) said that their attitude towards the chosen study program had changed negatively. To the question what they liked best at the faculty 18.5 % said that it had been understanding and responsiveness of the teachers, 16.1 % – extra curriculum activities, 15.3 % – *Azemitologs* festival on October 1, 12.9 % – group mates, an equal number – eight students had marked the process of studies, nice atmosphere at the faculty and rational time table.

To the question what was most upsetting in the first semester of studies 18 have marked the difficult process of studies in general, 17 – specifically descriptive geometry, 13 – physics and 11 – mathematics. As the most understandable courses from the angle of view of teaching the students have mentioned chemistry (56.5 %), descriptive geometry (28.2 %), informatics (26.6 %), psychology (11.3 %) and mathematics (10.5 %). It should be mentioned that the students in their answers have mentioned several courses, therefore in the sum there are more than 100 %. There are several study courses and teachers that are understandable by some students but for the others, vice versa, not understandable. So, among the latte physics (55.6 % of answers), mathematics (50.8 %), and descriptive geometry (22.6 %) are mentioned.

32 respondents consider that for better acquisition of the study course more strict control of independent work in mathematics should be needed, the same number consider the same about physics.

In September, 2010 three weeks after the beginning of the studies an enquiry was carried out among 69 first year students of the program Agricultural engineering. To the question about considerations for the choice of the study program 71 % answered that it had been stable interest in machinery, 20 % had thought about another sphere of studies but still had chosen engineering, 5.7 % had chosen the program due to their parents need for having an engineer on their farms and 2.9 % had chosen another program but could not stand the competition and stayed in engineering.

To the question about arguments that influenced the choice of the study program in 38 % of answers work perspectives are mentioned, 32 % – interest in machinery, 9 % – good references about the faculty, 8 % – continuation of the background education, 5 % – good salary. Four more answer versions are mentioned with less proportion.

46 % have got information about the study program in the faculty home page, 14 % from friends and 14 % from the students of the faculty, 9 % from their parents that have graduated the Latvia University of Agriculture and 8 % – in the yearly national education exhibition *Skola*. Some of these

exhibitions have been attended by 52 % of students. Four more answer versions are mentioned with 3 % and less proportion.

49 % of the program students have attended the Open door days at the Latvia University of Agriculture, but the faculty was attended only by 36 % of the students. All of them have got good impression about the faculty.

All the enquired students are satisfied with the beginning of studies. Among the impressions at the beginning of studies 28 % of the students have mentioned the positive attitude of teachers towards students, 24 % – some difficulties to adapt to the intensive study regime and big amount of work, 7 % – rational time table with free Fridays and 6 % nice peers.

In the middle of October, 2010 the second year students were enquired – 36 of the Agricultural engineering program and 16 of the program Machine design and manufacturing. The attitude of the students towards the chosen study program after the first year of studies can be seen in Fig. 4. The most essential difference between the study programs is the fact that in the answers of the Agricultural engineering program students the proportion of satisfied and very satisfied predominates – 95 % in comparison to 81 % of the Machine design and manufacturing program.

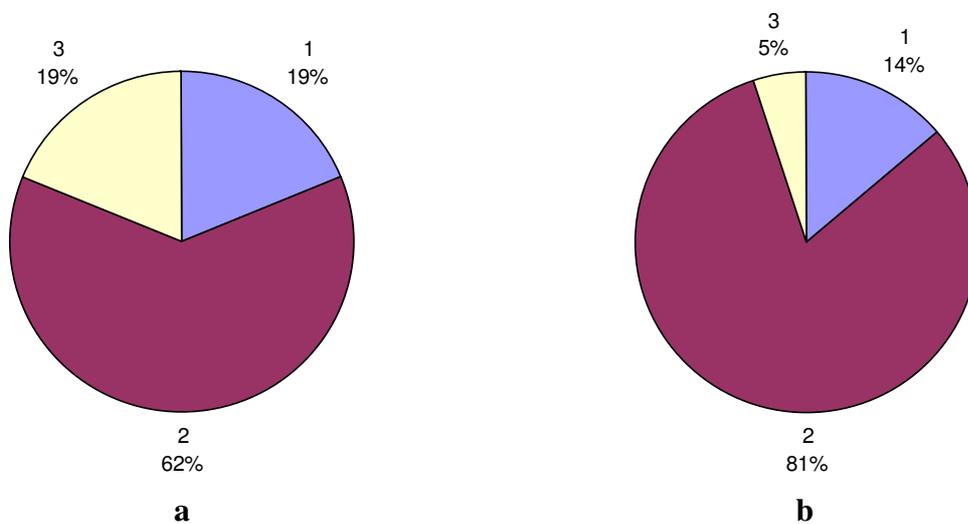


Fig. 4. Attitude of the second year students towards the chosen study program:

a – Machine design and manufacturing; b – Agricultural engineering; 1 – very satisfied; 2 – satisfied; 3 – difficult to say

The enquiry shows that already traditionally the students have difficulties with mathematics, physics and theoretical mechanics. In this aspect there are no essential differences in the evaluation of students of different programs.

At the beginning of June, 2010 15 fourth year students of the Agricultural engineering program were anonymously enquired after the defense of the Bachelor thesis. 13 respondents said that they understand the aim and the tasks of the study program, two respondents understood them partly. 11 respondents were satisfied with the place of the courses in the study program, four – partly satisfied. 8 respondents were satisfied with the organization of studies, three were partly satisfied, but four did not have an opinion.

To the question what has been most satisfactory in the program the answers were as follows: practical sessions (6 answers), responsive teachers (5), rational time table (4), the quality of the obtained knowledge (2), teaching excursions (2) and practice (2).

To the question what has been most dissatisfactory in the program there are only a few answers: old literature in some study courses (3), insufficient amount of practical examples (2), attitude of some teachers (2).

The students have mentioned 11 teachers the quality of work of which they evaluate high, among the mentioned there is only one teacher outside the faculty. There was also a question about the teachers the quality of work of which has been most unsatisfactory. Four teachers were mentioned, every of them one time. Also here there is one teacher outside the faculty.

Answering the question about the most satisfactory teaching methods of the study courses 13 courses have been mentioned where there were two in four answers and one in 3 and 2 answers, the others are mentioned one time. In the answers about the study courses where the teaching methods have been unsatisfactory 7 courses were mentioned, four courses were mentioned in two answers, the others one time.

11 students have said that they are satisfied with the management of the program and the general administration at the faculty; the other 4 have not expressed their opinion. 11 students have evaluated the assessment of knowledge as objective, two have mentioned that the assessment could be more objective; one considers that the assessment could be more strict, but one has not expressed the opinion.

14 students have evaluated co-operation with the teachers within the program as good, one has not expressed the opinion. Two students have evaluated co-operation of students with teachers as very good, 11 – as good, two students have not expressed the opinion.

8 students have evaluated the methodical ensuring of the program as good, three as average; three would like to have more literature in Latvian. The material – technical ensuring of the program has been evaluated as satisfactory by 10 students, 4 would like to have it more up-dated. 8 students think that the teachers motivate students to participate in scientific research, two students consider the possibilities of research as satisfactory, two have not paid attention to research, in turn, and two more have got into research only while developing their Bachelor thesis.

13 students plan to get a job successfully in the acquired specialty; one prognosticates quite successful work possibilities.

## Conclusions

1. The total number of students in Latvia has decreased by 20.8 % during the last six years, but at the Faculty of Engineering of the Latvia University of Agriculture in the sphere of engineering the number of full-time students has not decreased, but the number of part-time students has decreased during the last five years.
2. Students of different years of studies positively evaluate the positive psychological climate at the faculty that promotes integration of the students in the process of studies.
3. The students have stable motivation to choose the study program that does not change essentially during the studies.

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