DEVELOPMENT OF COOPERATION WITH GRADUATES THROUGH REUNION

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Abstract. By now 5985 engineers and Bachelors of Engineering sciences who are working in different branches have graduated from the Latvia University of Agriculture (LLU), Faculty of Engineering (TF). It would be difficult to find a sphere where the graduates from the faculty are not working. Since 1985 every year the faculty organises reunion for the graduates who have graduated 20 years ago. Since 2000 in relation to anniversary celebrations a summary about the activities of the graduates of the corresponding year during the studies as well as after the studies is prepared.

Key words: graduates, education, enquiry.

Introduction

During twenty years after graduation it has been possible to supplement the theoretical knowledge acquired at the university with the most different kinds of practical life experience and to achieve a lot in the chosen sphere of life. The authors of the article have tried to summarise only a small part of the available public evidences about the activities of the graduates during their studies and after the graduation from the university. In the books prepared about the graduates of the corresponding course the materials collected over the years in the faculty museum have been used. Also notes of the teachers and the materials obtained from the personal archives of the graduates are made use of.

Materials and methods

The aim of the research is to summarise, evaluate and maintain the experience and values of the traditions that promote sustainable development.

The actual situation is stated and self-evaluation is obtained through enquiries among the students during the studies as well as among the graduates. Analysing the present situation the further development emerges, the indices that are used – RADAR and Deming cycle.

Autonomous enquiry – in order to get the opinion about every specialty stressing its specificity. It can be kept in mind that students, parents and employers are consumers in higher education. Contacts should be found and maintained, only then items on further development can be solved.

Results and discussion

In order to assess the process of studies and its results repeated anonymous enquiries among employers, graduates, students and teachers have been organized. In 2000 in the enquiry 16 questionnaires from employers, 78 from full-time and 41 from part-time students and 136 from the graduates from the undergraduate study program *Agricultural Engineering Sciences* were received.

The employers evaluated the training level of the graduates. In this assessment of the employers the training level is excellent for 12.5 %, good for 81.2 % and satisfactory for 6.3 % of the graduates [1]. The most part of the respondents consider that the graduates are able to work independently, they have adequate outlook, they can successfully communicate with their colleagues, solve practical and theoretical problems.

To the question – whether hiring a specialist they would prefer a graduate from the Faculty of Engineering or other related faculty 73 % preferred to hire a graduate from the Faculty of Engineering, but the other 27 % did not give an unambiguous answer.

In total in the proposals of the employers it is stressed that in the process of studies more attention should be paid to the acquisition of management skills, economic evaluation of problem solutions and market analysis, more narrow specialization and practical training.

The students in the enquiry assessed the process of studies. In full-time and part-time studies the second, third and fourth year students were enquired.

To the question whether in the study process management the principles of democracy are observed 83 % of the respondents of full-time studies gave an affirmative answer, 10 % – negative,

but 7 % do not have a definite opinion in this question. In the comments to the negative answers the students mainly criticized the requirement of the teachers for compulsory attendance of lectures. The human relations of the administration, teachers and students were evaluated positively by 94 % of the respondents, negatively – by 3 % and also 3 % of the students do not have their opinion on this question. As to the part-time students, 40 % are generally satisfied with the proportion of lectures, practical and laboratory sessions, 23 % consider that it would be good to have more practical and laboratory sessions, but 20 % – more lectures. 13 % consider that introductory and review lectures are of essential importance, but 4 % on the contrary, deny it.

To the question about the necessity for academic and professional studies in part-time studies 74 % specify that both kinds of studies are needed for the students to have a possibility to choose, 15 % declare a need only for academic, but 11 % – for professional studies.

In total 90 % of students are satisfied with the professional qualification of the teachers, but with their pedagogical competence – 85 % of the students. With the possibilities to get consultations with the teachers in total 78 % of the students are satisfied, 22 % consider that in some subjects this possibility should be enlarged.

92 % of full-time students are generally satisfied with the proportion of lectures, laboratory and practical sessions. 13 % of the students have indicated to the necessity to enlarge the proportion of practical and laboratory sessions in physics, IT and technical subjects. In the study year 2001/2002 the proportion of laboratory and practical sessions in mathematics, physics and chemistry was increased.

In the enquiry among the graduates their activities, place of residence and self-assessment of their results in studies were stated. 54 % of the respondents live in the countryside, 46 % – in the city. 20.8 % of the respondents are working in their private business, 14.8 % – on farms, 9.4 % – in co-operative enterprises, 6.7 % in forestry and the same number in municipalities, 6.0 % – in secondary educational establishments, 4.7 % in automobile service enterprises, 4.0 % – in agricultural machinery service enterprises, 3.4 % in auto schools and the same number in police, 2.7 % in foreign companies, 2.0 % in regional municipalities and the same number in auto transport enterprises, by 1.3 % in agricultural production processing enterprises, construction, agricultural advisory service, system of technical surveillance, road traffic safety department, insurance system and by 0.7 % (one person) – in electro energetic enterprise, heat energy enterprise, gas supply, media, customs, state defense forces, bank and Saeima (parliament).

The main duties of the respondents in their work place were as follows: production – 19.2 %, service and application of machinery – 15.6 %, 13.6 % – administration and the same number staff management, 7.2 % – trade, 6.0 % – accountancy and finances, pedagogical work – 5.2 %, work with computers – 4.8 %, 4.4 % – collection and processing of information and solution of strategic problems, consultations – 3.2 %, design – 1.6 %, scientific work – 1.2 %.

The graduates evaluated their level of training after graduation from the faculty as follows: excellent – 7.6 %, good – 74.2 %, satisfactory – 18.2 %. None of the graduates considers the level of training as poor. 84 % of the graduates admit that in their practical work they have had a necessity to apply their knowledge in engineering-technical calculations, designing, technical drawing etc.

The graduates acknowledge that the special technical subjects as well as economics, psychology, management and marketing are at work the most useful subjects. They mention the subjects the amount of which should be increased – foreign languages, psychology, management, entrepreneurship and IT. They mention also the subjects that according to their opinion should be excluded from the curriculum – they are mainly political subjects, especially those politicized during the soviet times.

Number of students matriculated in the Agricultural engineering study program and graduates

	Number according to years											
	2003		2004		2005		2006		2007		2008	
	F*	P*	F	P	F	P	F	P	F	P	F	P
Matriculated	138	42	124	38	97	31	113	35	68	33	71	24
Graduates	54	18	53	29	50	24	31	11	32	7	26	9

*F – full-time studies, P – part-time studies.

The faculty has close contacts with the employers – graduates from the faculty. On March 28, 2008 there was a reunion of the graduates from 1958 and 1988. 14 graduates from 1958 and 73 graduates from 1988 were present. It was the twenty third time when the faculty organized a reunion of the graduates who had graduated 20 years ago. For the reunion a book "Graduates of 1988 from the Faculty of Agricultural Engineering" (192 pp.) was prepared and issued [3].

An enquiry was carried out among the participants of the reunion. It showed that 17 participants are working in private business, 6 of them – in a heat production enterprise and 6 in a foreign company, 4 are working on farms, 4 in automobile service, 4 in public utilities, the same number in construction, higher schools; 3 of them – in agricultural machinery service enterprises, the same number in energy supply; in other places the proportion is less. The main duties in the present work place: staff management (26 respondents), administration (21), service and application of machinery (17), production (13), work with computers (11), consultations and trade (10 and 10), the in other 8 spheres the proportion is less. The respondents indicate that the knowledge acquired at the faculty has been very useful in their professional life. The graduates and the potential employers state that it is necessary to maintain the same technical training level for the students and to promote acquisition of knowledge in management and psychology.

The student union has established very active and close contacts with employers, also mainly with the graduates from the faculty, through the traditional student days of the faculty – "Mehu dienas". In 2008 for support of *Mehu dienas* the students had attracted 87 sponsors. In the faculty Home page section *Photo and video* information can be found on *Mehu dienas* of the recent years.

Already for more than 20 years there is a panel „Absolventi" („Graduates") prepared on which regularly articles from media about the activities of the graduates from the faculty are shown.

Starting with 1984 the students from higher schools were recruited for the service in the Soviet army. It left considerable impact on the proportion of the young people who had started studies and graduated from the higher school. Figure 1 shows the fate of applicants of the year 1983 when the students were not recruited for the service yet. In the program *Agricultural Mechanisation* in the first year for full-time studies 150 applicants were enrolled, in *Autotransport* – 25. In the normative duration of studies 72.7 % of the students received the diploma in the program *Agricultural Mechanisation* and 76 % in the program *Autotransport.* In turn, 20.7 % of the students did not graduate from the program *Agricultural Mechanisation* and 16 % from the program *Autotransport.*

In part-time studies in 1983 in the first year 67 and 17 new students were enrolled correspondingly. In the normative duration of studies (6 years) the diploma was obtained by only 14.9 % students in the program *Agricultural Mechanisation* and 23.5 % in the program *Autotransport,* but correspondingly 73.1 % and 70.6 % of the students have not graduated from the programs.

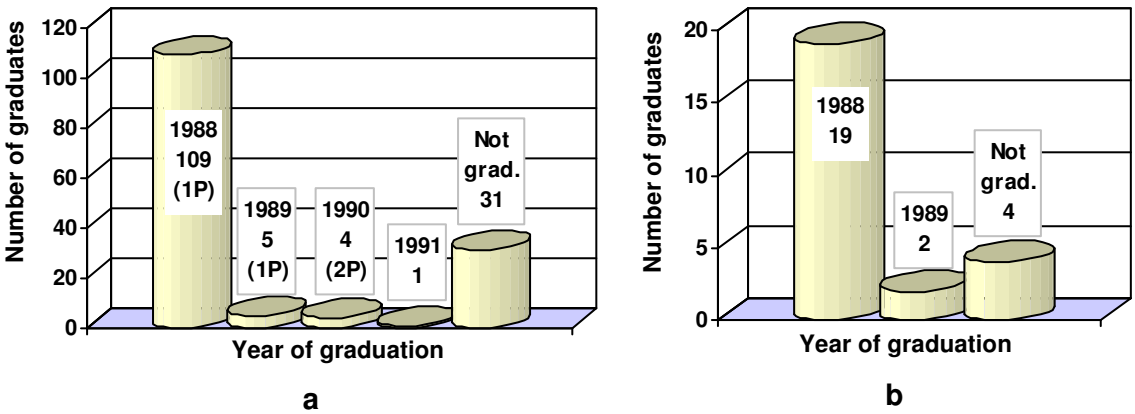

Fig. 1. **Graduation of 1983 applicants**

a – program *Agricultural Mechanisation*; b – program *Autotransport*; P – part-time studies

Also in the summer of 1984 in full-time studies in the first year the same number of students was enrolled as in 1983, but in the autumn more than 2/3 of the new students were called up to the army. It influenced also the course of studies. Therefore, after the normative time of studies – five years the program of *Agricultural Mechanisation* was graduated only by 11.3 % of the 1984 applicants, the *Autotransport* program – only by 4 % (Figure 2) [4]. After 2 years – in 1991 also 36 % and 40 % students graduated from the programs accordingly. From the students enrolled in 1984 43.3 % and 44 % have not graduated from the programs according to the information known to the authors. Three students during the studies passed over to the Faculty of Agricultural Economics and in 1991 graduated from it after part-time studies.

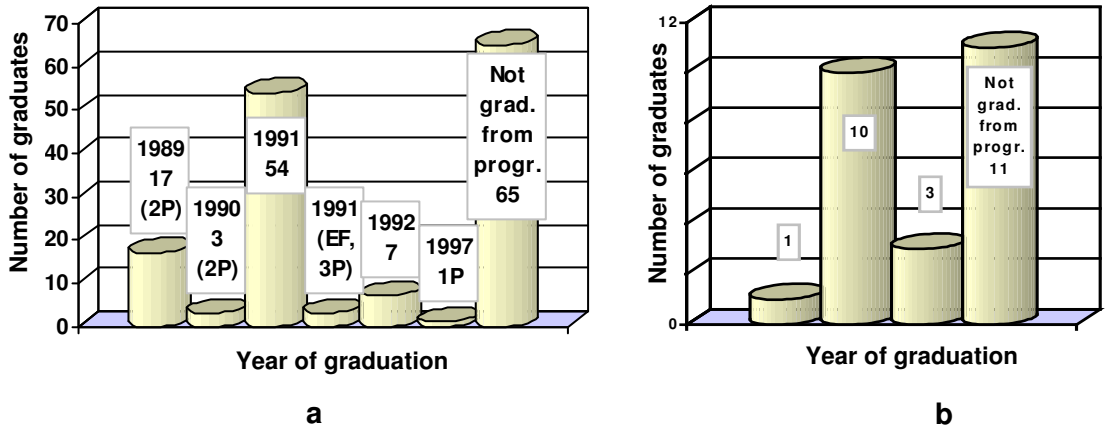

Fig. 2. **Graduation of 1984 applicants**

a – program *Agricultural Mechanisation*; b – program *Autotransport*; P – part-time studies; EF – Faculty of Agricultural Economics

Enquiries and their analysis make it possible to improve the process of studies. Since October, 2005 enquiries among the second year students are carried out with the aim to state the opinion and references of the students about the first year of studies [2]. In September, 2005 five students of 38 enquired said that they are very satisfied with the choice of the future profession, 27 are satisfied, 4 were not sure about the choice but two students were not satisfied. Most critical remarks were expressed about the delivery of physics, mathematics and theoretical mechanics. Delivery of IT, metal processing, engineering graphics and measuring devices was assessed positively.

At the beginning of October, 2006 seven of the respondents of 43 enquired answered that they are very satisfied with the choice of the future profession, 32 – satisfied, 3 were not sure, but one was not satisfied. The most critical remarks were still expressed about the delivery of physics, mathematics and theoretical mechanics. Positive assessment was expressed about the delivery of psychology, metal processing, philosophy and measuring devices.

At the beginning of October, 2007 24 of 31 respondents answered that they are satisfied with the choice of the future profession, but 7 were not ready to judge about it. The most critical remarks were still expressed about the delivery of physics, mathematics and theoretical mechanics. Positive assessment was expressed about the delivery of psychology, metal processing, philosophy and measuring devices.

On March 28, 2008 in the reunion an enquiry was carried out among the graduates of the years 1958 and 1988. 14 graduates of 1958 (70 graduated) and 73 of 1988 (141 full-time and 46 part-time graduates) were present at the reunion.

Information from the enquiry among the graduates of 1958. Eleven respondents answered that they were from the countryside, 2 – from the city. At the time of the reunion still 6 of the graduates were working: 2 in private business an one in a higher school, the same number in construction, professional educational establishment and insurance company. As the main duties at work three mentioned consultations, two – pedagogical and administration work, one – production, the same number – accountancy, collection and processing of information, solution of strategic issues and staff

management. Five have mentioned that they had been working during the studies, in the field of speciality – three of them. Three have admitted their level of training after graduation from the faculty as excellent, seven as good, one as satisfactory. Eight respondents admit that in practical work they have had a need to apply the knowledge in engineering-technical calculations, designing, technical drawing, measuring; two admitted that they did not have had such a need. The main conclusion from the results of the enquiry – engineers need to hive wide range of knowledge.

Information from the enquiry among the graduates of 1988. In total there were 71 respondents. 30 mention that they are from the countryside, 29 – from the city and 4 – from urban villages. Four graduates have been working all the time at the same work place, seven have changed the workplace one time, 16 – two times, 17 – three times, 8 – four times, 6 – five times and 3 – more than 5 times. 17 have marked private business as their present workplace, 6 – a foreign company and the same number – heat supply companies. Four have mentioned farms, the same number – automobile service enterprises, public utilities, construction enterprises and auto schools; three – electro energetic and the same number – agricultural machinery service enterprises as well as State fire fighting and rescue service, two – Road Traffic Safety Department and the same number – local municipality; one – advisory service and the same number technical surveillance system, state defense forces and state revenue service. The main duties at work by 26 respondents are mentioned as staff management, 21 – administration, 17 – machinery service and usage, 13 – production, 11 – work with computers, 10 – trade and the same number – consultations, 7 – strategic issues, 5 – pedagogical work, 4 – accountancy and finances, 3 – designing and the same number – collection and processing of information, 2 – scientific work. 36 have mentioned co-operation with foreign countries. Co-operation with Germany (11 respondents), Estonia (8), Poland (5), USA (4), Lithuania (4), Russia (3), Belarus (3), Czech Republic (3) was mentioned. 14 more countries were indicated. 42 have admitted that they had worked during the studies, 26 of them – in the field of studies. During the studies 31 have actively participated in organization of public activities, 25 in amateur groups, 15 in scientific work contests, 8/9 of them also outside the LLU. 12 respondents have assessed their training after graduation from the faculty as excellent, 42 as good, 7 as satisfactory and one as poor. 48 have admitted that in their practical work they had had a necessity to apply the knowledge in engineering-technical calculations, designing, technical drawing, measuring. The respondents have assessed practically all engineering-technical subjects as the most useful ones; it is surprising that also mathematics and physics are mentioned several times.

Conclusions

1. Regular contacts with the graduates from the faculty ensure a possibility to get to know the opinion of the employers as well as their, as former students, attitude towards the study process at the faculty and its improvement.
2. The fields of work of the graduates from the faculty are various and it requires comprehensive education.

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