



Educational Activity and Changes in the Educational Structure in the Bologna Process at the Agricultural Faculty of the University of Debrecen

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SUMMARY

It seems imperative to overview the new educational structure from time to time and suggest alterations if necessary. Based on the above, it will be justified to summarize the experiences after completing a "full educational cycle" (7 BSc terms + 4 MSc terms) and initiate alterations. Before commencing MSc courses it is highly important to examine the logical set up of BSc and MSc courses since the knowledge offered by both will contribute to the final higher (MSc) standard of requirements. The BSc courses are adequate for the requirements of economy. Socially and economically, however, the guidelines are not yet clear regarding the various competences and the demands of the workplace. This problem was highlighted at the first MSc entrance examinations: even the best students choose to seek employment and entered into correspondent rather than full-time training. In the BSc training special attention must be paid on the support of students with modest abilities, while outstanding students must be sought out and provided with research possibilities. The labour market is not adequately familiar with the Bologna process, they cannot properly differentiate between students having graduated in the traditional or the linear system. Most tertiary institutions, however, contacted the employers, and their opinions were included into the training programs. It seems desirable that in the future the requirements of the labour market be included in the planning of the individual courses. Professional forums may provide adequate grounds for the employers to familiarize themselves with the linear training system, and they can offer advice regarding competences expected on the various levels.

The history

The history of agricultural tertiary education in Debrecen spans almost 140 years. The Debrecen National Economic Highschool was founded in 1868, which marks the beginning of tertiary economic and agricultural education in Debrecen as well as the entire Eastern-Hungarian region. Between 1906 and 1944 agricultural training was offered by the Hungarian Royal Economic Academy; it was re-introduced at the Debrecen Agricultural Academy in 1953. Between 1962–1970 agricultural experts were trained at college level at the then Agricultural College, which was later awarded "university rank". With two provincial faculties (Szarvas, and formerly Hódmezővásárhely, then Mezőtúr) it constituted the Agricultural University of Debrecen from 1970 until 1999.

On January 1st, 2000 five university faculties, three college faculties and three research institutes amalgamated into the University of Debrecen. In 2002 the Faculty of Agriculture Economy and Rural Development was founded. By 2006 the number of faculties of the University grew to fifteen. The Faculty of Agriculture, the Faculty of Agriculture Economy and Rural Development, and the Technical Faculty formed the Centre for Agricultural Science and Engineering.

The role of the Faculty in the country and in the region

The Northern Region of the Great Hungarian Plain possesses such natural givens and social traditions that demand well trained experts for the agrarium and related fields, who are able to contribute to the economic and social development of the region.

One of the country's most spacious agricultural land of outstanding soil quality can be found in this region with related livestock, as well as enterprises that can process the raw material produced for the food industry. The Faculty is primarily devoted to train experts for these firms and enterprises, and it also supports the process of transferring research results into the practice of agricultural production.

The place of the Faculty in the region, the surrounding industrial environment, the importance of agriculture, the food processing capacity facilitate regional, national and international research projects. In the eastern region the need for development, the presence of innovative skills may ensure that research results are incorporated into practice. The students' interest in the Centre's faculties highlight the success of the accreditation activity that preceded the introduction of the Bologna process. Despite the demographic pitch and the declining number of students in agriculture, a significant number of first year students enrolled in the autumn term of 2008.

The Faculty's mission and vision of the future

The mission of the Faculty of Agriculture is the development of a multi-functional agriculture and that of the country in the Northern Region of the Great Hungarian Plain and East-Hungary. Consequently, beyond the primary task of training experts, the institution fulfills regional, national and international research and advisory tasks as well. In the course of the past years, the number of the student population and academic staff has changed significantly. In harmony with the requirements of a multi-faced and multi-fuctional agriculture and regional development, the scope of educational and research fields have been extended. The interaction between scientific areas is intensifying, which is desirable on medium and long range too. Our efforts can be captured as "colourful education and transferability". The Faculty can satisfy the personal and infra-structural requirements of the currently developing linear educational structure. The educational programs are flexible in structure and colourful in content, and we intend to preserve these qualities in the future too.

The accredited laboratories make it possible to win projects that respond to continuous market needs. We intend to create student and research laboratories of high standard and to ensure the conditions for special, valuable equipment, and special measurement procedures. The PhD (doctoral) Schools embrace wider and wider fields, and their programs provide adequate background for the scientific training of gifted students.

Structural changes education as a result of the Bologna process

The first BSc experimental courses were introduced in agricultural tertiary institutions in the academic year of 2005/06, and they were concluded in June 2008. Full BSc courses were introduced in 2006/07 only. As a result, we have no full experience regarding the 7th term, and the connection between the labour market and the two-level training. Through the entrance procedure at the beginning of this term (2008/09) we gained experience regarding the enrollment of BSc (and college) students' application for MSc courses. The total number of students presently are 1800 students

A new element of the 6+1 term structure is a 7th term, which is to be spent in practice, the requirements of which are still to be developed. The introduction of the seven-term BSc program will affect the training system and its timing: more institutions are expected to commence MSc programs in February.

Reshaping the structure of education was started in 2005. The first BSc students completed their studies at the end of academic year 2007/08. Our first MSc courses commenced in 2008/09. At the same time, the last students of the former, traditional training system are about to graduate. In 2007/08 our tertiary vocational and post-graduate were renewed. However, they form no part of this study.

True to the traditions of agricultural tertiary education in Debrecen, our students are provided with high standard research and infra-structural background and colourful training on multiple levels.

The Faculty was granted to commence the following BSc courses:

- Livestock Production
- Food Science
- Horticulture
- Environmental Management
- Agriculture Management
- Plant Production
- Nature Conservation
- Game Animal Management

The Faculty submitted its application for BSc course in Mechanical Engineer of Agricultural and Food Processing to the Hungarian Accreditation Committee of Tertiary Education. In 2008 we could enroll students in every course, the most popular of which were: environmental management, nature conservation and food science.

The following 6 master courses (MSc) commenced at the autumn semester in 2008:

- Agriculture Science
- Animal Science
- Food Safety and Quality Management
- Horticulture Science
- Plant Protection
- Nature Conservation

Those who have graduated in master courses and will wish to pursue teaching or scientific-researcher as a career, may deepen their knowledge as PhD students in three Doctoral Schools in the fields of plant production and horticulture, animal production, and that of interdisciplinary agriculture and science.

Based on the above-mentioned, it can be claimed that educational activity at the University and the Faculty has developed dynamically since the foundation of the Debrecen University in 2000. Student interest in our courses is significant, and it defies the demographic pitch. The institution has introduced both levels of the Bologna process in most areas of education.

Experiences Regarding the Bologna system

It is generally agreed that the Bologna process, i.e. the two-level training system ought to have been introduced with greater care. The hasty introduction of the BSc courses has proved not well-thought over.

Within agricultural education too many, that is 15 courses were accredited, largely based on the former college courses. In this light, it appears that not only does the number of courses not decrease but each institution aims at offering the widest possible training spectrum. Of course, it does not mean that every institution can start each and every accredited course since the number of possible students is decreasing. The introduction of new BSc courses resulted in a fragmented course structure. The number of BSc courses needs to be lowered while carefully observing the social and economic requirements. Certain institutions, however, urge the introduction of new BSc courses.

Had the BSc and MSc courses been designed at the same time, it would have contributed to a structure more unified in approach and better designed in content. Our educational activity needs to be reconsidered since the BSc courses are to meet the double requirement of practice-oriented training and laying the grounds for the MSc training as well. Our system in its present form can fulfill these goals only with great difficulty. It is an important principle, of course, that the BSc training must be practice-oriented, while the MSc training must provide high-level theoretical knowledge. The institutions need more assistance with re-structuring their educational systems as well as with developing adequate communication strategies.

The time available both for BSc and MSc course accreditation and commencement was very limited, and so it was for informing college and secondary school students too.

Our experience regarding the traditional and linear training systems can be summarized as below (*Table 1.*):

Table 1.: Advantage and disadvantage of the traditional and linear training

Advantage	Traditional training	Linear training
	<p>Strong theoretical training supplemented with practical training.</p> <ul style="list-style-type: none"> In 5 years the logical build-up of courses can be properly planned. The educational structure is rigorously built on one upon the other. <p>The students have adequate time to adapt themselves to university requirements. From year 3 they usually perform better. Their interest in scientific research appears in year 4.</p> <ul style="list-style-type: none"> Student mobility can be well planned. 	<ul style="list-style-type: none"> Practice oriented training, which prepares students for the MSc. Foregrounds problem solving thinking. Characterized by flexible training, and innovative approach. In term 7 (practice term) students can exercise their knowledge in practice. A pre-condition of a BSc degree is an intermediate "C" type language exam in one foreign language. (A number of students cannot meet this requirement!)
Disadvantage	<ul style="list-style-type: none"> Some Western European countries—not knowing the content of the 5-year training—under-valued our degree and equated it with a BSc one. 	<ul style="list-style-type: none"> Little time is available for theoretical foundation, if adequate practical experience needs to be provided too. Presently the labour market does not acknowledge the competence of the linear training. The requirements for BSc and MSc students have not been outlined yet. The BSc system can meet its double requirement—practice oriented training and preparing students for MSc—with difficulty! At colleges even lower-level theoretical training can be expected! Term 7 renders graduate studies from non-agricultural fields more difficult. Student mobility can be planned with difficulty only.

Programs for supporting outstanding students, exchange programs

The faculty devotes exceptional attention to supporting outstanding students within the framework of the "Support Program for Outstanding Students at the University of Debrecen". The most gifted students are "selected" and then a supervisor introduces them into scientific activity, student research, or the program of the Tormay Bela Group. The number of participating students is growing year by year, they can be considered possible future PhD students.

In April 2007, the Centre for Agriculture Science and Engineering housed the Agricultural Section of the National Student Research Conference, which meant great honour for the Support Program both at the Faculty of Agriculture and the Faculty of Agricultural Economy and Rural Development. Our students performed well at the conference:

four students received first placement, three students – second, and six students – third placements, and one student was given a special award. International exchange programs, farm practices are available for the students. The Centre has contracts with 47 (mostly European and some US) tertiary institutions within the framework of the Socrates, Erasmus and Ceepus programs. About twenty to thirty students and a number of teachers participate in these programs.

Practical training: its present and plans for the future

The conditions for practical training are better than average, the possibilities offered by the pilot farm are adequate, so is the co-operation with agricultural firms, though its further improvement is a continuous task.

To organize and operate practical training sessions have always been a strong side of the faculty.

Further partners in practical training are: KITE Zrt., IKR Rt. Bábolna, Mezőhegyesi Ménesbirtok, Hajdúböszörményi Mezőgazdasági Rt., Agrárgazdaság Kft., Nagisz Kft., Kasz-Coop Kft., Baromfi-Coop. To organize and operate term 7 is a challenge for the Faculty.

Foreign language training

A special emphasis is given to foreign language training, technical language training within the framework of our "foreign language education program". The Department of Agricultural Technical Language and Communication Studies offers free courses in English, German, Russian and French for four semesters, and prepares students for the "Zöld út" technical language exam. Students with intermediate language skills – or close to – can chose from the cluster of "economic language and communication" courses, in which professional language and inter-cultural communication skills, business English, the language of environmental protection and law receive special attention. To meet the intermediate language requirement prescribed by law for BSc students is a serious challenge both for a number of students and their language teachers. We intend to work out a motivation program for students and teachers.

Quality, quality education, quality ensurance

Within the framework of quality ensurance the Faculty of Agriculture conducts students evaluations of academic staff, as well as staff satisfaction measurements. We intend to establish educational, research and strategic committees. The Faculty Council has already started to revise the quality ensurance system. An information base is being set up that will facilitate the monitoring of the educational and research activity of the academic staff. The faculty has acquired the ISO 9001 and ISO 14001 certificates.

Several independent organizations have assessed the level of education at our faculty and the level of our students' satisfaction. The Heti Világgazdaság published the following summary regarding the Faculty: "Students of the Western-Hungarian University" and the those of the Faculty of Agriculture, Univesrity of Debrecen are of surprisingly high opinion of their universities. They consider the acknowledgement of their degrees in Hungary very good (3.80 and 3.82 respectively), and find the requirements very demanding (3.97 and 4.10). In the light of the latter, i.e. it is difficult to meet the requirements, it is worth mentioning, however, that the students find it relatively easy to gain admission to the Agricultural Faculty of Debrecen (3.05). It appears that most agricultural tertiary institutions have the common tendency that it is relatively easy to get in, but it is much more difficult to acquire a degree. What is behind this slightly strange phenomenon is that the entrance treshold is relateively low, yet the level of training is of high standard."

A similar assessment can be read about the level of training in Heti Világgazdaság Diploma 2007, which ranks the various tertiary institutions including the agricultural ones too. The Agricultural Faculty of the Univeristy of Debrecen was allocated the prestigious second place, later in Diploma 2008 it shares the first place. In the overall rank of faculties the Agricultural Faculty moved to the 27th place from the 35th of the previous year.