

Introduction

With the introduction of the AMKs (*Ammattikorkeakoulut*) in 1990, the landscape of the Finnish higher education sector has changed immensely. The transformation of the vocational sector started in the 1980s when highly specialised study lines were combined into more comprehensive basic programmes. Despite this effort to broaden the curricula, the structure of vocational education, including the so-called higher vocational education, was considered to be too rigid and inflexible both with regard to individual needs and the demands of the changing world of work. This inflexibility was aggravated by the fact that education in different fields was given in specialised institutions.

In the early nineties, it was felt that the vocational education sector needed to change again, this time more drastically. In addition, this time there were more arguments for the desired reform from the side of the higher education sector. The Finnish system of vocational education was characterised by a very wide selection of vocational diplomas of varying lengths and levels. Until 1990, the system of vocational education included all vocationally oriented education including higher education. This meant that higher vocational education, which in many countries would be classified as belonging to the higher professional sector, was regarded as vocational education in Finland. The fact that it was placed somewhere between secondary and higher education made the Finnish system difficult to place in the international perspective. Another factor leading to the AMKs reform was the need for a new way to deal with the constant growth in the demand for higher education, which was earlier channelled through an expansion of the university system. The purpose of the changes was to create a new and attractive educational route especially for the students who had completed the matriculation examination and at the same time 'save' the universities from the masses. In other words, the aim was to raise the level of higher vocational education to the tertiary level. AMKs were supposed to offer programmes that would be more professionally and practically oriented than those of the academic universities and which would respond to the changing demands for qualifications in working life alongside academic university education. During those days, the labour market indicated that there was a need for a highly trained expert work force. In this sense, the AMKs were supposed to provide a competitive alternative for highly educated young people to gain a degree and qualify them for the highly-trained work force (Beverwijk and Schrier, 1999). Nowadays Finnish higher vocational education can be compared with what is generally called higher professional education.

The AMKs were created gradually during the 1990s. As mentioned in the previous section, the AMKs have evolved from the former vocational institutions, which provided the highest level of vocational education. In a way, the

reform has divided the Finnish vocational education and training system into two: vocational institutions, which provide secondary education and training, and AMKs, which provide professional higher education (Ministry of Education, 2000).

Nowadays due to the reforms, the AMKs form a professional higher education sector, which operates alongside the university sector. There are 29 AMKs and 20 universities. The universities are run by the state, while AMKs are either locally or privately run. In the latter case, local authorities have founded private companies to run an AMK. Because of the regional nature, most of the publicly owned polytechnics are run by municipal federations (Ministry of Education, 1998, p. 73). Under the AMK Act, it is possible to establish state-run AMKs, but at present there is no foreseeable need for this (Ministry of Education, 2000).

Input

In the following table one can see that the number of students attending AMKs has grown enormously. The percentage of students studying at the AMK has grown from 5% to 29%, whereas the percentage of students studying at the universities has decreased. In 1997 there were 2.4 times more students studying at universities than at AMKs.

Table 8.1: Total number and percentages of students studying at AMKs and Universities

	1992	1993	1994	1995	1996	1997
AMK	6,884	14,225	23,601	31,072	44,339	58,590
Universities	122,227	126,123	128,167	135,107	138,173	142,818
<i>Percentage</i>						
AMK	5%	10%	16%	19%	24%	29%
Universities	95%	90%	84%	81%	76%	71%

Source: Higher education Monitor, 1999

Students apply for entry to AMKs after general or vocational upper secondary education. The requirement is a Finnish matriculation certificate, i.e. an upper secondary school leaving certificate, a basic vocational qualification, or an equivalent international or foreign qualification. The AMKs determine their own entry requirements and select their students. The selection is based on the student's school achievement, work experience and often also an entrance test.

Universities have higher entry requirements than AMKs. Students are required to have either a polytechnic degree, a higher vocational diploma, a post-secondary level vocational qualification or a minimum of three years' vocational qualification, or to have completed the Open University studies required by the university. Anyone considered by the university to have suffi-

cient knowledge and skills may also be admitted. Universities select their own students, and there is a lot of competition for places. All fields apply *numerus clauses*, in which entrance examinations are a key element. Universities offer openings for about one third of qualified school leavers. Applicants educated abroad may be admitted if they are eligible for university studies in the country concerned. The universities, their faculties or departments, make the selection. They can be ranked on the basis of 1) marks in the matriculation examination and in the school-leaving certificate, plus entrance tests, 2) on the basis of entrance tests only or 3) on the basis of marks in the matriculation examination and in the school-leaving certificate (Ministry of Education, 2000).

Structural characteristics

Degrees and programmes

AMKs and universities are two totally different systems with different types of degrees and programmes lengths.

The length of AMK degree programmes is governed by the legislation. All programmes require a minimum of three and a maximum of four years of full-time studies. The AMK Decree defines the length in more detail as 120 to 160 credits. For two degrees (for midwives and sea captains), however, 180 credits are required. In practice, there are no 120-credit programmes. The term 'credit' refers to approximately 40 hours of work: the study load for an academic year is 40 credits. A student may study for one year longer than the duration defined for the degree programme. In practice, the average study duration to finish the degree is four years. After successfully finishing the degree programme, students receive an AMK degree with a reference to the field of specialisation, e.g. AMK degree in administration and trade (Ministry of Education, 2000).

As a rule, Finnish AMKs comprise several disciplines or fields. As the AMKs are regional by nature, their provision is based on the needs of local business and industry. In general, the AMKs seek to offer education in nearly all relevant fields (e.g. from primary production to business and administration, and from engineering to social welfare, health, and culture). Each polytechnic degree programme is defined as a course of studies which concentrates on a given area of professional expertise. Degree programmes may be further divided into specialisation lines. Degree programmes consist of basic studies, professional studies, optional studies, on-the-job training, and a diploma work. In basic studies, students learn the elements of their professional fields. The degree programmes also include communication and language studies. The professional studies go deeper into the main areas, practices and applications in the field, and familiarise the student with theoretical or artistic fundamentals. The compulsory on-the-job training period is a minimum of 20 credits. Apart from acquainting students with their professions and future jobs, it offers them an opportunity to combine their degree work with hands-on job experience, to work independently, and to apply their theoretical knowledge in practice (Ministry of Education, 2000).

The degree system of the Finnish universities was overhauled in the 1990s with a view to international equivalence, larger freedom of choice, and com-

prehensive degrees allowing flexible combinations of study modules from different fields and establishments. Under the previous system, most studies that led to Master's and Bachelor's degrees existed in only a few fields of study. In the new degree system, it is possible to study for a Bachelor's or Master's degree in twenty different fields of study. The Bachelor's degree (120 credits) can be taken in three years and the Master's (160 credits) in four years. However, students are allowed to do their master study in five years. Although the Master's degree should be finished in five years, the average duration of a Master's studies is 6.5 years. Graduates can go on to study for a postgraduate degree: a licentiate or a doctorate. In most fields, students can take an optional licentiate's degree before going on to a doctorate. Professional postgraduate degrees, i.e. specialist degrees, are awarded in medicine, dentistry and veterinary medicine. Outside the degree system, specialist training is given through extensive continuing education programmes for which the university awards a diploma or certificate. The degree reform is still in progress, and up to the end of the reform process universities will also award the old types of degrees. Due to this the degree structure can vary from one university to the next (Ministry of Education, 2000).

Studies in a subject (or a degree programme) are usually classified as basic, intermediate or advanced. A lower (Bachelor's) degree consists of basic and intermediate studies in the major subject, including a Bachelor's thesis, studies in one or more minor subjects, and language studies. For the higher (Master's) degree, students must complete an advanced study module and prepare a Master's thesis in addition to completing the Bachelor's syllabus (or in addition to basic and subject studies in a degree programme). Contrary to the AMKs, practical training is not required in every degree. Some degrees require compulsory practical training; for others it is optional (Ministry of Education, 2000).

The AMKs provide education of high quality to fulfil the labour needs formally met by vocational higher education (college level and higher level). Students that graduate from AMKs and students graduating from universities get different jobs. Graduates from AMKs end up in somewhat lower positions (status, salary, etc.) than university graduates. For example, students graduating from AMKs can get jobs such as midwives and nursing but they cannot become a doctor because this job requires a university degree (Ahola, 2000).

Co-operation between sectors

The Finnish Ministry of Education encourages universities and AMKs with the same specialisation to co-operate, i.e. in the design of study modules, the development and maintenance of international relations and through the use of each others equipment. They emphasise, however, that they should function independently of each other. They argue that both universities and AMKs must be 100% self-sufficient in producing their own degrees (Beverwijk and Huisman, 1999). In other words, each of the institutions must offer their own version of the programmes, and no joint degrees are offered. Students with a polytechnic diploma can continue studying at the university. These students start studying in the first year at the Bachelor level.

Other system characteristics

Finance

Finnish AMKs, which are either municipal or private, are financed nearly 100% by the government and the local authority. AMKs also seek to acquire external funding, mainly from continuing education services and R&D. Universities, on the other hand, are 70% funded by the state. The rest of their funding they acquire through external funding such as business and international funding.

All higher education students, thus both AMK students and university students, initially receive student aid for the duration of 55 months (4.5 years). Regarding tuition fees, no tuition fees are charged for AMK programmes and Bachelor's and Master's programmes in universities (Vossensteyn, 1997, p. 34).

Personnel

The AMKs have two categories of teachers: principal lecturers, for whom the requirement is a postgraduate (licentiate or doctorate) degree, and lecturers, who must have a Master's degree. Both categories of teachers must have a minimum of three years of work experience. There is no information available about the minimum requirement for lecturers at the university.

Research

Both AMKs and universities conduct research, legitimised by government. However, in order to be able to conduct research at the university, the student is required to have a Master degree. Scientific postgraduate education, in particular, is closely linked with the research work performed at universities and research institutions. The AMKs are not allowed to conduct the same type of research conducted by universities. The 'research' in AMKs is mainly local research and development activities in connection with local firms and other social partners. It's not basic research in the same meaning as in the universities. In this sense, emphasis on research will most probably be different, i.e. in universities the focus is more on fundamental issues versus the AMKs that focus more on practical issues (Beverwijk and Schrier, 1999). In contrast to universities, AMKs do not receive any research funding from the government. However, they can apply for the same research funds as universities, e.g. at the EU level (Ahola, 2000). In other words, the emphasis and type of research of AMKs and universities differs to a large extent.

In contrast to universities, AMKs are required to be evaluated according to national standards. Universities can apply to be evaluated, and may indicate themselves how they want to be evaluated.

AMKs have been evaluated since their establishment in the early 1990s. Uniform evaluations were introduced in 1995, when the temporary AMKs began to apply for accreditation. The aspects evaluated include the business idea, the relevance and need of the degree programmes, strength areas, teachers' level of education, education-industry relations, co-operation with universities and other educational establishments, regional educational and service function, international co-operation, self-evaluation mechanisms, and the learning and work environment (Ministry of Education, 1998). The procedure includes a self-evaluation report and an on-site evaluation by the Accreditation Sub-committee. Whenever AMKs offer new study programmes,

the Accreditation Sub-committee is involved in the evaluation of these new programmes. The self-evaluation framework for accreditation is set out in the relevant legislation and covers both quantitative and qualitative data and the following criteria. FINHEEC's (Finnish Higher Education Council) Accreditation Sub-committee conducts assessment of the self-evaluation report and on-site evaluations. The ultimate decision on the content of the evaluation report submitted to the Ministry rests with FINHEEC (Beverwijk and Schrier, 1999).

The present pattern of evaluation efforts at universities is a diverse, multi-faceted one which has not uniformly influenced all institutions in Finland. This means that the evaluation objects and methods vary from university to university. In implementing their institutional evaluations, universities have emphasised different things; e.g. one has laid special emphasis on the evaluation of teaching, one university on strategies, and the three universities in eastern Finland have concentrated on their regional role and one on administration. The Council sees no reason to impose a unified model on all university evaluation at this stage. The universities volunteer or apply to be evaluated. The approach and the schedule are always agreed between FINHEEC and the university concerned (Beverwijk and Schrier, 1999).

Output

The Bachelor's degrees offered at universities are intermediate qualifications in the Finnish Higher Education System. The reason for this is because the Bachelor's degree qualifies students for the labour market. In the AMK sector there is no formal intermediate qualification (Schrier and Kaiser, 1999).

Developments and conclusions

AMK reform

The divide in the Finnish higher education landscape started in 1990 and was not related to the discussion of the Bachelor/Master structures. In a way, the AMK reform divided the Finnish vocational education and training system into two parts: vocational institutions, which provide secondary education and training, and AMKs, which provide professional higher education. With the introduction of the AMKs, the higher education sector also got a clear division. Although the AMKs could be identified as the professional higher education sector, they do not offer Bachelor's and Master's degrees.

Bologna declaration

The influence of the Bachelor/Master discussion can be seen in the reform that took place at the university in 1990. At that time, both government and the higher education institutions in Finland agreed upon the introduction of a two-cycle model at the universities. The aim was to introduce a flexible and internationally compatible programmes which was considered fairly important for the Finnish government and higher education institutions since the country was relatively isolated from Europe (Van der Wende, 1999). In addi-

tion, within the new structure universities hope to increase the output of students. This degree reform is now almost fully implemented.

AMKs should, in sum, be seen as an alternative to universities, and not as subcontractors for lower academic degrees, i.e. as a path to university studies (OECD, 1995, p. 114). The focus on the idea of an alternative to universities has kept the binary divide between AMKs and universities alive. Considerable differences continue to exist in terms of size of the institutions and the sector (despite the impressive growth), the degrees offered and the research function.