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Equal, but Different
An Evaluation of the Postgraduate Polytechnic Experiment in Finland
Final Report
Foreword

The present evaluation report is the international and final evaluation covering the postgraduate polytechnic degree programmes in Finland. It was preceded by an interim evaluation in 2003, also conducted by FINHEEC. Both of these evaluations hopefully prepare and constitute a good basis for political decisions on the establishment of the postgraduate degree in the Finnish polytechnic system. The Act on the Piloting Phase of the Postgraduate Degrees became effective in 2002, and the final Act on the degree may be passed and become effective in 2005.

The pilot phase of the degree programmes has given a rich amount of experience that can be utilised in further planning and execution of the programmes. It is expected and planned that, by 2008, about 2000 students will enter these programmes annually, while in the longer term the target is 20% of polytechnic graduates. This is a very ambitious target, but maybe not too ambitious in the context of the development of the knowledge-based society of Finland.

This international evaluation is an important step in the development of the Finnish polytechnics. The postgraduate degree further supports and strengthens the development of the dual nature of the Finnish higher education system. At the same time, however, it is important in supporting and maintaining the integrity of university education; the new degree will respond to working life needs, and thus also aims at avoiding the so-called academic drift. The Evaluation Team is proposing a clear distinction between ‘working-life oriented’ and ‘scientifically based’ division at the Bachelor level, but apparently the same distinction could also be applied at the Master level. The diploma supplement will, of course, be an important element of the degree at every level.

The ongoing Bologna process will also give an additional and important international dimension to the discussion and decisions about the degree structure in Finnish higher education. The Evaluation Team has made its observations in this regard, and it has also produced good arguments in support of its recommendations.

An important element and recommendation by the Evaluation Team is also that every polytechnic could and should have the right to apply for programmes for the advanced degree; and the criteria for granting such rights should be related to the needs of the labour market, the quality and contents
of the programmes, the regional coverage without overlap, and their sound financial and academic basis and support.

We sincerely thank Professor John Pratt and his Team for a work which was not an easy one, but the report shows their deep dedication and penetrating insight in the issues that they were facing. The Team deserves our deepest gratitude.

In Kuopio, October 26, 2004

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The Evaluation Team made visits to Finland on 21–23 March, 10–11 May and 20–24 September 2004. The Team interviewed exponents of the Ministry of Education and various organisations, as well as university and polytechnic students and staff. The Team also acquainted itself with the postgraduate degree programmes of Helsinki Business Polytechnic as well as Seinäjoki and Satakunta Polytechnics during visits to these three institutes.

The evaluation report on the starting phase of the polytechnic postgraduate degree experiment was published in early 2004 (Ammattikorkeakoulujen jatkotutkintokokeilu – Käynnistysvaiheen arviointi, FINHEEC publications 1:2004).
1 Introduction

1.1 Background

This is the final report of the evaluation undertaken by the Finnish Higher Education Evaluation Council (FINHEEC) of the pilot project with respect to postgraduate polytechnic degree programmes in Finland.

The formal decision to establish such programmes, on an experimental basis, was announced in the Development Plan for Education and Research 1999–2004 (Ministry of Education, 2000a). This said:

‘Polytechnic postgraduate degrees of 40–60 credits will be introduced in some fields in response to the needs of working life. The decision on the expansion of the postgraduate degree system will be made on the basis of experiences gained in this pilot project.’

The Act on the Piloting of Postgraduate Degrees in Polytechnics was passed by Parliament in 2001 and took effect from 1 January 2002 (L 645/2001). This pilot phase lasts until 31 July 2005, by which point the decision concerning the possible expansion of the postgraduate degree structure must be taken.

However, the Government has already announced its intention to submit proposals to Parliament for a permanent system of postgraduate polytechnic degrees to come into force immediately after the piloting phase. The Development Plan for Education and Research 2003–2008 also made clear that the Government intends that the degrees will be offered in a wider range of fields and polytechnics than in the pilot phase, and that by 2008, about 2000 students annually are planned to enter these programmes. Its longer-term aim is that 20 per cent of polytechnic graduates will study for a postgraduate polytechnic degree. It is in the context of these government intentions that this evaluation was undertaken.
1.2 The evaluation

The 2001 Act required two kinds of evaluation to be undertaken by the Finnish Higher Education Evaluation Council (FINHEEC). First was an evaluation of the applications for experimental permits from polytechnics; second was an evaluation of the experiment itself, of which this report is part.

This ‘end-of-experiment’ evaluation has involved a substantial and comprehensive programme of work. It had two main elements – an interim evaluation to be completed by November 2003, and a final evaluation to be completed by October 2004. The interim evaluation was undertaken by a group of Finnish experts in higher education (FINHEEC 2004). It drew on the experience of FINHEEC with a ‘light touch’ self-evaluation of the programmes themselves – the evaluation group decided to perform the work following an order in which the “light-weight” self-evaluation of the training programmes which had started operating during the first experiment year were followed by sector-specific discussions, further complemented through thematic interviews – and supplemented this with a range of sector-specific discussions, further complemented by thematic interviews with staff in polytechnics responsible for the programmes, students, and representatives of the employment sector. In all 42 respondents were interviewed. In addition, data were collected in a ‘follow-up’ study exploring the application and student selection processes, the backgrounds of students and principal lecturers, as well as questions on the study programmes and curriculum structure (Okkonen 2004). This Final Evaluation report should be seen as complementing, rather than superseding, the impressive work evident in the interim evaluation and should be read in conjunction with it.

The interim evaluation focussed on:

- Working-life needs and the demand for postgraduate polytechnic training.
- Training models designed on the basis of the plans.
- Cooperation between the employment sector and the polytechnics in training.
- Compilation of the curriculum as well as the teaching and learning processes.
- Planning and functioning of the degree structure.
- Student recruitment and selection procedures.
- Student counselling, team and individual work.
- Pedagogic and practical arrangements in relation to the students’ working and life situations, especially as concerns the working-life development task.
Quality assurance methods and quality assessment related to the training programme.

The final evaluation focussed on:

- The attainment of the objectives set for the experiment.
- The working-life needs and demand for the training.
- The structure and scope of the postgraduate polytechnic degree experiment and its compatibility with the working-life needs.
- The status of the postgraduate polytechnic degree in the higher education system.
- The higher education policy steering the experiments, also reflected against the respective international development.
- A comparison with the working-life needs expressed in the previous reports.

The final evaluation was undertaken by an international team, bringing together three experts from other countries with wide experience of postgraduate level work in polytechnics and cognate institutions with three Finnish higher education experts. The team undertook a preliminary visit to Finland in March 2004, and then two further visits. In May 2004 the team had discussions with the Minister of Education, representatives of Parliament, the Government, the social partners and other national organisations of stakeholders, including the universities, the polytechnics themselves and the student unions in both sectors. In September 2004 it met a wide range of stakeholders in three locations where postgraduate polytechnic programmes are offered in a variety of formats.

We wish to record our thanks to all those with whom we had discussions and who prepared material for us. We were impressed by the level of discussion in our interviews and by the interest, commitment and high level of work of those concerned with the programmes. Not least we must thank Karl Holm, the officer in FINHEEC responsible for the evaluation team, who organised our programme with efficiency and good humour.

Throughout this report we have used the term ‘polytechnic’ to describe the institutions, known in Finnish as ammattikorkeakoulu or AMKs.
2 Polytechnic postgraduate programmes and overall policy for higher education

2.1 The polytechnic policy

The polytechnic policy was part of the overall government strategy, in the context of changing economic and geo-political circumstances and a severe economic decline in the early 1990s, to develop a ‘knowledge economy’. The polytechnics are intended to concentrate on the education and training of ‘high quality experts in working life’ (Ministry of Education 2000b:1). The main aims of the policy included:

- Providing an alternative route into higher education with a more practical emphasis, alongside the universities.
- Increasing the international comparability of vocationally oriented higher education in Finland; polytechnics offer vocationally and professionally oriented courses of around three and a half or four years leading to a Bachelor’s degree.
- Strengthening regional development (many polytechnics are owned by municipalities), and co-operation with SMEs.

The 1995 legislation made permanent the experimental system and the polytechnics’ initial set up. The polytechnics policy resulted in the creation of 29 higher education institutions (operating in the field supervised by the Ministry of Education), amongst other things, by amalgamations of about 215 schools and colleges, which hitherto had offered mainly post-secondary level vocational education. By 2004, there are about 26,400 entrants (plus about 6,300 adult entrants) annually to the polytechnics, representing about two thirds of those entering higher education. The remaining students are in the 20 universities.

The programmes in polytechnics last 3.5 or 4 years, and lead to an award at Bachelor level. Until recently university first degree programmes led to a Master’s award. Following the Bologna Declaration, the universities are adopting from 1.8.2005 a two-cycle system with a three years Bachelor degree programme followed by a two years Master’s degree programme.
2.2 The postgraduate programmes in polytechnics

The idea of postgraduate degrees in polytechnics has been debated in Finland for a while, starting not long, in fact, after the creation of the polytechnics themselves. These discussions were inspired by ‘a wider international debate on university level teaching’ (FINHEEC 2004, p 3) and developments taking place in the Netherlands and Germany. In February 1998, a working group was set up in the Ministry of Education to plan the pilot phase of the new postgraduate programmes. The Ministry asked the polytechnics themselves to put forward their proposals for the eventual pilot programmes in October 1998, and by January 1999, some 21 polytechnics had suggested 51 programmes. However, uncertainty about future developments meant that it lasted till December 1999 before the Government did commit itself to establish postgraduate programmes in fields where needs of working life were evident. Further work based on the outlines drawn at the highest political level, completed by March 2001 suggested that programmes in three fields should be developed, i.e. in business and administration; in social welfare and health care; and in technology and transportation. Following the 2001 Act, the Ministry of Education published its invitation for applications for the programmes in August 2001. Of the 53 applications sent by the polytechnics, 36 met the predetermined quality criteria. FINHEEC issued its evaluation statements on 14 December 2001, and the Ministry of Education granted the respective permissions on that basis on 6 February 2002.

According to the Act, the experiment should constitute a balanced whole both regionally and in terms of the different language groups. On the basis of these criteria and the qualitative evaluation by FINHEEC, the Ministry of Education granted the permission to 20 polytechnics for the experiment involving one or several postgraduate degree programmes. This implied that some of the training programmes satisfying the FINHEEC criteria did not get this permission.

In autumn 2002, the experiment was extended to include the training programme of competence management (technical field). In addition polytechnics could, under certain conditions, submit supplementary applications concerning other training programmes. There were 100 starting places available for the year 2003. A total of 18 applications by the polytechnics were received, with 14 meeting the required quality criteria. Of the six permits granted by the Ministry of Education in February 2003, four were given to a polytechnic with no earlier experiment permits.
The development of postgraduate programmes in the polytechnic sector in Finland has been controversial. Since the beginning of the debate there were ‘contradictory and contrasting views’ (Lampinen 2004). Some argued that it was too soon to set up postgraduate programmes in polytechnics, since the sector itself had only been in existence for a few years. Others felt that postgraduate training for polytechnic graduates should take place only in universities which, unlike polytechnics, had a long experience of work at this level. The Bologna Declaration of European education ministers added confusion, not least because it became clear that in many of the involved countries both university and polytechnic sectors would be likely to offer second cycle postgraduate programmes.

This controversy was reflected in the Act and changes to the plans put forward by the Ministry of Education. The establishment of the programmes as ‘experimental’ reflected the concerns and Parliament required them to be formally evaluated. A broadly based working group was set up to follow-up and coordinate the development. Instead of what might be called a ‘developmental’ model – in which the polytechnics put forward proposals for programmes and those that were judged meeting the most imminent needs would be approved – the fields and titles of programmes were tightly determined in the Act. Work experience requirements – at least 3 years after the polytechnic degree – were also made more stringent.

This controversy has not entirely diminished with the setting up of the programmes. However, the experimental nature of the programmes and the stringent evaluation requirements helped to allay some concerns. The universities’ earlier opposition has been moderated by the definition of the polytechnic programmes as a work oriented and as an adult education degree. Indeed, the value and strength of the programmes resides in its basic philosophy: students operating as experts in their own field, through studying and doing R&D work in close collaboration with highly innovative teachers and tutors, and their own working environment. As underlined in the latest report by the follow-up group “The training offers superb opportunities to integrate theory with practice, to recognise and conceptualise practical phenomena and to illustrate and evaluate them against the purpose and objectives of the work. This will lead to the development of work life, whilst providing a deeper insight for the learner” (Okkonen 2004: 13).

Nevertheless it is clear that the future development of these programmes is important, not only in terms of the nature and quality of the programmes themselves, but also because of their implications for the future development and structure of higher education in Finland as a whole. In particular, the development of postgraduate programmes in the polytechnics has raised questions about the ‘institutional landscape’ of higher education in Finland and about the maintenance of the dual system.
2.3 The institutional landscape

As in most countries, history is responsible for the pattern of higher education in Finland. Its universities have been founded at varying times since 1640 and it developed its polytechnic sector only in the 1990s. By comparison with many countries, it has a large number of universities (20) for its population (about 5.2m). Norway, for example, with 4.5 million inhabitants has only 4 universities and 6 specialised university colleges; the Netherlands has 16 million inhabitants and 13 universities. Many of the Finnish universities achieved their status not long before Finland introduced a polytechnic sector. As a consequence a ‘natural’ overlap can be observed between the less scientifically and more professionally oriented side of the university sector and the more scientifically and research orientated side of polytechnics. Factors such as this raise questions about the nature and maintenance of the dual system. Should there, for example, be redefinitions of the universities and polytechnics, or even mergers between them, in some regions?

In this respect we can also point to specific international and global developments as a consequence of which a country such as Finland has to review carefully the competitive and innovative nature of its higher education system. Examples include the creation of an open European Higher Education Area; the European policies concerning the knowledge economy; the possible effects of regional and global trade agreements, including WTO/GATS; and the intensifying marketisation strategies of foreign universities from, for example, Australia and the UK. All these can be argued to make it necessary for the Finnish authorities to reconsider the nature of the current Finnish higher education landscape.

Of great relevance, when looking at the three fields in which polytechnic postgraduate experiments are taking place, is the difference between the established university fields, technology/engineering and health care, and business administration where the polytechnics have developed their own space/reputation. In the latter no obvious needs to ‘integrate’ postgraduate activities with universities can be observed, on the contrary, there might be good arguments to prioritise specific postgraduate developments (in teaching as well as R&D) in the polytechnics over the universities postgraduate activities in business administration. However, in the former areas most polytechnics apparently have difficulties in establishing themselves at the postgraduate level independently from the universities. We have heard a number of examples of university-polytechnic cooperation in technology/engineering, in particular, that were not equal and balanced, but instead were dominated by the universities in question.
2.4 The dual system

Although as we have just noted, Finland was relatively late in establishing a dual system (many countries did so in the 1960s or 1970s), the development of the polytechnic policy, as OECD (2003, p 154) reported, has been ‘remarkably successful...there is clear acceptance of the existence and value of a sector of higher education with a distinctive educational mission’. A majority of entrants to higher education in Finland now go into the polytechnic sector, it retains its attractiveness to potential students, and offers a wide range of vocationally oriented courses at Bachelor level. At the same time, Finnish universities have maintained a high reputation in more academically oriented education and research.

A key aim of the dual policy was to maintain institutional stability in the higher education system, and by so doing to offer individual choice. As OECD (2003, p 171) puts it, ‘the aim is to offer maximum individual mobility but minimum institutional mobility... Choice for individuals is only possible if there are differences between institutions and the programmes that they offer’. Although the policy has been criticised (Raivola et al. 2001), several other studies indicate that the dual system has been accepted by the employment sector and students.

In general the aim of polytechnic education in Finland was employment directed. Students were expected to enter employment on graduation after their three to four years of study and the large majority of them did so. Only a small number were expected to go on to universities for further study to Master levels and, in fact, only a small percentage has done so. Nevertheless, as the number of polytechnic graduates increased, pressure for specific polytechnic postgraduate degree programmes developed. Three main reasons were offered for this:

1. Polytechnic graduates would be able to continue their studies in the same kind of institution.
2. The postgraduate polytechnic degree could be used to expand and diversify higher education by enhancing professionally oriented, non-university training.
3. The needs of working life would be better met.

The decision to proceed with these programmes means that Finland has changed the model of the dual system; duality has been extended to the postgraduate level (see Figure 1 which compares Finland with some other European countries). This raises, again, the question of the respective roles of the universities and the polytechnics.
Figure 1. Some models of dual systems

- AMK Universities
  - Finland until 2002
- Polytechnics
  - Britain until 1992
- Fachhochschulen
  - Austria (1993-)
- Colleges
  - Denmark
- HBO Universities
  - The Netherlands
- Colleges
  - Norway
2.5 Blurring the boundaries?

Until the polytechnic postgraduate programmes were established, the two sectors in Finnish higher education were distinct in a number of ways. The main, educational policy, distinction was – and remains – between the orientation and focus of work in the two sectors (as noted above, between an orientation to the needs of working life and to scientifically based activities). This was supported by differences in control and funding mechanisms in the two sectors. However, there were also *de facto* distinctions that helped to make the development of the polytechnic sector more palatable to those opposed to it; teaching programmes in universities were longer and led directly to a Master level degree, whilst those in polytechnics did not formally go beyond undergraduate level.

Following the Bologna Agreement, the universities are developing a two-cycle system, with Bachelor’s and Master’s degree programmes. The sectors are now seen as more directly in competition, with, in particular, each sector offering ‘stand-alone’ postgraduate programmes. As a consequence, it is now very implausible to envisage the polytechnic sector without any postgraduate programmes. There is a broad, if not universal, acceptance of the value of such post-experience and part-time programmes directed to the needs of working life (Ministry of Education 2004b: 45). Without such programmes in the polytechnics, the only choice for students with polytechnic Bachelor’s degrees would be to go to Master courses in the universities, the majority of which are not directed to this market – but intended for full-time continuation on a ‘scientific’ basis after a Bachelor’s degree. To develop a wide range of post-experience part-time postgraduate programmes in the universities would be to seriously confuse the nature of the dual system – as we note below.

The issue has been compounded by two other developments in the university sector. First is the clarification of the ‘third’ function of universities – their responsibilities towards working life in the new Act going through Parliament at the time of writing. The wording of the proposed new Act concerning this matter comes down to the following: “The universities’ main tasks are scientific research and education that is based on the research. And while conducting these tasks, the universities must work in harmony with their surrounding society”. This does not suggest directly a need for the development of working life oriented activities by the universities. Nonetheless, even though the universities’ teaching programmes have to be based on their basic research activities, the wording in the new Act is still seen by some institutions as allowing the universities to shift their focus towards areas already identified as being mainly the domain of the polytechnics.
Second, as a consequence of the first issue, some universities have developed post-experience Master programmes that appear to be in the same fields and directed to the same purposes as those in polytechnics (Okkonen 2004). As one of our respondents put it, these university Master programmes are being marketed ‘aggressively’. This competition may well hurt the overall expansion of the polytechnic sector, since they will be, in certain domains at least, in direct competition for students with the universities. These fears are confirmed by Puukka (2004 quoted in Okkonen 2004: 13) who notes that “the individual polytechnics’ chances of recruiting its own students in certain areas have been weakened because universities have launched Master programmes in the competence areas of the polytechnic”. The question of ‘blurring the boundaries’ in the dual system has thus arisen. In these circumstances, we felt it important to examine the extent of commitment to maintaining the dual system in Finland.

2.6 Maintaining the dual system

We have found that there continues to be a widespread commitment in Finland to a dual system of higher education, with the polytechnic sector concentrating on activities broadly directed towards the needs of working life, and the universities focusing on more scientific education and research. This clearly applies at governmental, and as far as we can tell, at parliamentary level and has been reinforced in the recently published Education and Research Plan 2004–2008 (Ministry of Education 2004b). Although this policy has been in place for a relatively short time, it appears to be widely understood and accepted. In particular, it is accepted by the universities as well as the polytechnics themselves, although it is recognised that the distinction cannot be absolute and that there will be a continuing need to consider which activities are best undertaken in which institutions, and that there is always likely to be some overlap. We note that this policy and the commitment to it were commended by the OECD Report on higher education in Finland (OECD 2003). We believe that this system of ‘different, but equal’ institutions should prevail, independently of the future institutionalisation of the postgraduate degree structure in the polytechnic sector. To some extent the current debates on the future of the postgraduate experiment crystallise a broader and certainly more serious concern about the place of each sector within the Finnish higher education system. They are another sign that the creation of the dual system has been a success and that the polytechnics are recognised as valuable institutions of higher education. For all these reasons, we support the Government’s commitment to a dual system in higher education.
However, maintaining a dual system requires more than commitment. *It requires the creation of a policy environment which promotes rather than hinders the development of distinctive institutions. It is also important to ensure that the full range of policy instruments available is used consistently with the policy – particularly to ensure that there are comparable (though not necessarily identical) rewards for different activities.*

In this regard, it is relevant to note the extent to which the two sectors are distinguished in some of the formal policy documents about their functions and missions. In some respects the distinctions are clear. The Act on Polytechnic Studies states that the goal of polytechnic education is to provide the necessary knowledge and skills qualifying the student for specialist professional duties based on the requirements of the working life and its development needs. Furthermore, the polytechnics should conduct applied research and development that supports the teaching given at the polytechnics themselves, as well as working life, regional development and the structures of the working life of the region. As indicated above, the proposed new University Act indicates that the main tasks of the universities are to do scientific research and education based on the research. By contrast to the polytechnics, the universities currently have a high level of autonomy concerning the development and implementation of their teaching and research activities (University Act, Section 6). The new University Act will not affect the level of institutional autonomy in any major way.

These distinctions are reinforced by policy statements. For example, in the statement on higher education policy (Ministry of Education 2000c), it is said that the Ministry will, for the university sector, take measures to ‘develop research units of high international standard’. The funding for university research will be increasingly allocated to ‘selected targets on the basis of quality’, and the graduate school system will be strengthened ‘to become the main instrument for researcher training’. For the polytechnics, on the other hand, ‘measures will be taken to develop professional postgraduate degrees and applied R&D jointly undertaken with business and industry’. The emphasis is clearly on basic and international research for universities and more local R&D projects in companies for the polytechnics.

There are clear distinctions between the two sectors in some other important respects. They are legally different kinds of institutions and they are funded differently. The polytechnics are owned by local authorities, joint municipal bodies, municipalities, or private organisations. The universities are state owned. Where the bulk of university funds come from the state, the municipalities contribute a substantial part of polytechnic funding. The basis of the funding also differs between the sectors, with the universities dependent
on output (of graduates), while the polytechnics’ core funding is based on input (of students).

Yet, not all policy statements are so clear. In some cases, the functions assigned to the two sectors are surprisingly similar. For example, one of the functions that is more or less universally accepted to be a defining characteristic of the polytechnics – regional responsiveness and needs of working life – is announced in the higher education policy to be the guiding light for the whole higher education sector: ‘In order to meet the needs of the regions the higher education institutions must pay special attention to developing their regional responsiveness through intensified cooperation with local business and industries by facilitating transfer of expertise to working life’. We have noted already the redefinition of the universities’ role in this regard in new legislation.

This ambiguity is reflected in the missions of individual institutions. Box 1 shows extracts from result agreements from two institutions – one polytechnic and one university, which display much similarity of wording.

**BOX 1**

Extracts from result agreements from a polytechnic and a university

*Lahti Polytechnic*

‘– to act as a synergetic centre of expertise and development and as a hub of tertiary education in the Lahti area
– to offer a wide range of training programmes and specialist courses which serve the labour market and enhance creativity
– to serve business and industry in the area, particularly SMEs, through a range of projects which emphasize active personal contacts, communications and trust
– to be internationally active vis-à-vis selected target countries based on the needs of businesses and corporations in the area
– to promote innovativeness by a combination of new, original degree programmes and existing study options, and by trying out creative specialist and adult education programmes in anticipation of the needs of the market.’

*University of Joensuu*

‘The University of Joensuu’s operations are based on high-quality research and education, international cooperation and the development of eastern Finland. The university is in part responsible for stimulating the regeneration of industrial activity in its operational area, facilitating the creation of the information society and promoting independent expertise.’
An interesting point in this comparison is to see what is said about research and development. At Lahti Polytechnic, it is explicitly stated that the R&D activities should be closely tied to the students’ final projects and, seemingly, also should be the link between the companies and the polytechnic. The R&D revenues are agreed to total 7% of the operating budget, which is significant because the R&D revenues seem to be the polytechnics’ main tool for affecting their funding situation. For Joensuu University this revenue target equals about 3% of the total budget. These levels explain why universities and polytechnics often compete locally for SME funding, especially in areas where there are not so many companies.

In neither of these agreements are there any proposals for local cooperation with other higher-education units. Lahti Polytechnic’s independent position is emphasised, while the University of Joensuu will continue to cooperate with some named Finnish Universities. However, in the Polytechnic Act the polytechnics are required to cooperate with other higher education units in their region. The University Act requires only cooperation and division of tasks between universities.

These kinds of uncertainties about the distinctions between the sectors, which, as we noted earlier, have been heightened by the development of postgraduate programmes in polytechnics, point to a need for the Government to take firm action if it wants to maintain the dual system. We set out our proposals for doing this is in Chapter 4.
3 The polytechnic postgraduate programmes

3.1 Introduction

Amongst the key concerns of this final evaluation of the experimental postgraduate programmes in polytechnics were the structure and scope of the programmes, their relation to the needs of working life and the status of the degree in the higher education system. It is to these topics that we now turn. In addition we also consider an issue that has arisen frequently in the discussion of these programmes – the international dimension. In reaching our conclusions we have drawn on the extensive material covered by the interim report, on the follow-up study of students (Okkonen 2004), on discussions with a wide range of stakeholders and on visits to three locations where these programmes are being offered, involving nine polytechnics. We have also studied a sample of dissertations produced by students at the end of their practical projects.

3.2 The nature and status of the programmes

We are able to state that we were impressed by what we have heard and seen. We are aware that we may have experienced a somewhat biased sample – institutions naturally will present their best practice – but we have no doubt that the programmes are comparable in standard with similar post-experience, second-cycle degree programmes in other countries with which we are familiar and which normally lead to a Master’s degree.

It is important to understand what this means in the context of post-initial, part-time programmes – designed for students in work, with a period of working life experience (usually at a managerial or near management level) and related to the needs of working life or the professions. Although these programmes are a new development in Finland they have been an important area of provision in other countries for some time (see Knight 1997, for more detail). In the UK in the mid-1990s, for example, Knight conservatively estimated that nearly 60 per cent of all (full-time and part-time) taught Master’s degrees had a professional orientation. As early as 1990–91, there were over 30,000 part-time taught postgraduate students in the traditional universities...
and nearly 12,000 in Master programmes in the polytechnics and other colleges. Most of these were in programmes comparable in focus to those in Finland’s polytechnics. However, this comparability does not mean that the Finnish postgraduate polytechnic degree programmes are identical to other post-experience higher education programmes in Europe (see also appendix 6.1). The Finnish postgraduate polytechnic programmes combine adult education and lifelong learning characteristics (the vocational orientation), with the structure of a formal degree programme, organised around and focused upon an R&D project to be undertaken by the student in a work-related situation. It is the combination of these elements that makes them internationally rather unique.

The nature of the programmes and student entrance makes demands of those designing them and teaching on them. The programmes, though of comparable standard to traditional, academically oriented Master programmes offered by universities, have different learning goals, and it is widely accepted that they need different approaches to teaching and learning. There are therefore a number of key elements of good practice that we looked for in the programmes in Finland.

One important feature is that the aim of such programmes is to enhance the students’ capacities as practitioners – usually expressed in terms of ‘competencies’ – as well as their knowledge. It is common for such programmes to have learning goals based on the nature of professional practice (for example, Schon 1983; 1987). These emphasise the development of the individual as an independent learner, the complexity of professional tasks, and the development of generic qualities often cited by employers as most highly valued – such as willingness to learn, motivation, team work, etc. (Winter 1995). The complexity and range of these competencies, together with the advance in subject knowledge needed for the professional project all contribute to the acceptance that the evaluated Finnish polytechnic postgraduate programmes are at Master level.

A further important feature of these programmes is that individual students have a wide range of skills, knowledge and experience on entry. Consequently the students have variable adult education and lifelong learning needs and expectations as well as those associated with more regular higher education learning. It is not possible at this level to assume a level profile of attainment in the different domains of knowledge and learning that might be assumed on programmes where students enter directly from a previous programme of study (though even there we think this assumption unwise). Nor are all their learning goals identical. All this means that post-experience programmes at this level require a pedagogy that enables students to identify the
skills, competencies and knowledge they need for their personal and professional development, and that amounts to a coherent programme of study that can be assessed at a recognised level.

We identified a number of features of good practice:

- The programmes in general develop high-level competencies in the students and are directed to the needs of working life.
- They appear to be well thought out and carefully structured to offer students, in general, an appropriate range of theoretical studies, both to broaden their understanding and to support their project work, and methodologies to enable them to undertake the dissertation project.
- The programmes offer students an initial opportunity (of varying lengths) to formulate their learning goals and identify the theoretical and other studies that they need.
- The programmes that we visited make good use of students’ own knowledge and experience, and both staff and students recognise the value of this.
- There was wide appreciation of the need for a substantial period of working life experience before entry to the programme (though see also below).
- The programmes are highly demanding of students, involving considerable study time additional to formally timetabled classes and tutorials.
- Many of the programmes have made extensive use of the Internet, both as a resource to gain literature and case study material, but also as a part of the teaching and learning process. Email contact is widely used, and many programmes have used video-conferencing, electronic seminars and conferences, using existing platforms, for example, WebCT, or constructing their own. Students, especially, spoke enthusiastically of the value and intensity of the use of these media. By comparison with some other countries, where e-learning is not always welcomed, or its use quickly declines, this experience in Finland is unusually successful, and we suggest that the Government may wish to support the development of e-learning processes more widely.
- We found that there was in general good support from employers and associations representing working life in the regions where the programmes were located. This refers especially to the private sector employers. A number of public sector employers were in general less enthusiastic about the programmes and less supportive for members of their staff who had enrolled in one of the postgraduate programmes.
- The students’ projects are helping to improve practice and enhance change in industry and the professions. We learned of instances where
such change was not only substantial, but being applied to other companies and in other countries.

- Many of the programmes involve effective cooperation between polytechnics and some include cooperation with universities.
- So far, dropout from the programmes has been low.

As in any area of education, there is variation in practice and there are a number of issues that need attention. However, whilst we are critical of some of these, we regard them as within the ‘normal range’ of variation likely to be found in any country at any level of work. Some of these have already been identified in the interim report so we do not list all of them here. Some of the more important issues include:

- Variation in numbers of enrolled students. A number of programmes have very few students and cannot be sustained economically at these levels.

- Irrelevance or unsuitability of some of the modules or courses in the theoretical part of the programmes. It is possible that some teachers have not yet fully understood the nature of the students’ needs for such studies – particularly on cross-disciplinary programmes where the students who are practitioners in one field are embracing developments in a new area.

- Variation in the extent to which programmes offer an initial period of self-assessment and formulation of learning goals. There are also variations in the timing of proposals to develop the practical project and thesis. In a few instances students’ practical projects had to be renegotiated when they changed jobs or because of problems in working life. *Whilst variations in practice are often appropriate to cope with different circumstances, it will be important for polytechnics to review what is best in the light of their own and others’ experience.*

- Narrowness or inappropriateness of the field of study in some cases. We had at least one indication that a programme was designed in order for the polytechnic to have postgraduate work in the field although the specification (determined by the Ministry for all programmes) was not apt either for the profession or the expertise in the institution.

- In a few cases we heard of difficulties with the requirement for three years of working life experience after graduation. This is consistent with the finding of the latest report by the follow-up group who noted that “The three-year work experience criterion is deemed to be too rigid, both by the applicants and the selecting officials, and therefore this criterion must be seriously considered from the perspective of lifelong learning and adult students” (Okkonen 2004: 13). A small minority of stu-
dents, who took their Bachelor’s degree after some years of working in their profession, felt that the time they needed before being allowed to enter these programmes was unnecessarily long. We recommend to accept work experience gained before entering a Bachelor programme in the enrolment conditions for postgraduate students. This would imply that the future Act should allow the institutions to accept such students to enter after a shorter period from graduation. Provided the process is monitored so that it is not used by institutions simply to increase numbers and is thus restricted to a minority of cases, we believe the precise period for these exceptions can be determined by the institution on a case by case basis.

Our overall assessment of the high quality of the programmes so far has a number of potential implications (see, for example, Pratt 1997). However, there is the possibility that we have seen a skewed sample of programmes and of staff or students. We have been conscious of this danger, and we have drawn on our experience of reviewing similar programmes in similar circumstances in Finland and other countries in coming to our conclusions. There is also the possibility that staff and students are exceptionally motivated because of the newness of the programmes and the opportunity these present for personal or institutional advancement. The momentum of the initial programmes may not be sustained as they are made permanent and settle down. It would be important to ensure that the high standard of these programmes is maintained in future and a similar standard is established in new programmes in other fields. FINHEEC will have an important role here, as will the networks being established of teachers and planners in the polytechnics.

3. 3 The needs of working life

One of the key arguments for the development of postgraduate programmes in the polytechnics is to meet needs of working life (Salminen 2003, 7). Polytechnics train and provide the labour market with experts oriented to the development of the working life sector (FINHEEC 2004, 40.) The added value of the postgraduate degree was defined to be the increase in practical employment sector expertise (Salminen 2003, 12). The Parliamentary Education committee stated that rapid changes in working life, internationalisation, and increased technicalisation of the operational environment, structural changes in society and the economy required updating the knowledge and skills of the labour force. In addition these developments require that enterprises and work communities obtain the knowledge and skills to meet the growing demands of expertise. As stated in the interim evaluation report “Almost all self-evaluation respondents highlighted the important role of expertise develop-
ment played by their respective experiments. From the students’ point of view, this would make it possible to develop the theoretical and practical skills basis, providing the competence and giving access to the tasks requiring special expertise, as also required by the Act on the experiment. Besides gaining a deeper insight into the skills of their particular fields, the students would gain a wider professional perspective (FINHEEC 2004, 41). This view was reflected in the Act on the Piloting of postgraduate polytechnic degrees: “the purpose of education leading to a postgraduate polytechnic degree, which is based on a polytechnic degree and geared to the development of working life, is to provide a sufficient knowledge and skills base and competencies for working in a development and other capacity requiring specialised expertise”. (L645/2001, § 3.)

3.3.1 Planning for the new programmes

Planning and implementing the postgraduate degree programmes was a complex matter. Several working groups and committees were set up to establish whether the postgraduate degree was needed and how it should be planned and implemented. Three groups of experts (one for each of the intended postgraduate training fields: business and administration, social welfare and health care, technology and transportation and technology) were set up by the Ministry of Education in September 2000. The groups consisted of experts in education, working life and different stakeholder groups and student representatives. They consulted experts in the respective fields and made surveys of working life. The reports did not include the social welfare training field. All three groups reported that there was a need for the programmes.

According to the report of the technology and transportation group (Hintsanen et al. 2000: 8–9) postgraduate polytechnic degrees are needed because of the rapid changes in working life and the increasing demands for expertise. The polytechnics should first and foremost participate in developing the SMEs of the region. They noted that enterprises are not able to train their personnel on a full-time basis, which is why the postgraduate polytechnic degree is suitable. The studies should focus on matters considered important in enterprises and on developing current issues. According to research by the Confederation of Finnish Industry and Employers (TT), those who work within industry should develop ICT skills, language skills and international dimensions, leadership, cooperation skills, marketing skills and lifelong learning. Similar development needs were expressed by the SMEs.

The report on the business and administration field (Tenhunen et al. 2000: 1) concluded that postgraduate training was needed in working life, especially in SMEs. The group concluded that entrepreneurship and business
oriented know-how at SME level should form the core of the business and administration postgraduate polytechnic degree studies. The employer sector was involved in assessing the purpose and need for the programme and expressed support for the content of the programme (Tenhunen 2003: 18–20).

The report on the health care field said that postgraduate degrees in health care would support professional development during the whole professional career (Lämsä et al. 2000: 3–4). Rapid change in society has brought about special needs regarding health care services. The operational environment is changing continuously and professionals need to develop their special expertise. Paulin (2003: 24–25) states that the postgraduate polytechnic degree in health care was planned to deepen the clinical patient care, counselling and rehabilitation, and to deepen the knowledge and expertise on clinical patient care. The expert group identified three main areas: 1) social and health policy; 2) developing patient care practices and health care technology; 3) defining the tasks of the health care professionals and enlarging the scope of their tasks. Working life representatives stated that postgraduate degree graduates are needed, but that the roles of university Master graduates and polytechnic postgraduate degree holders should not be mixed. (Lämsä et al. 2000: 8).

Thus, there was a substantial body of evidence about the needs of working life when the programmes were first considered at national level. As we have seen, the original idea of the experiment was not to define the training programmes in advance but to see what the polytechnics suggested and decide on that basis which fields needed postgraduate degrees the most (Salminen 2003: 8). Nevertheless the Government and Ministry working groups outlined the postgraduate polytechnic degree programmes quite strictly. Programmes were launched in three fields: business and administration, social welfare and health care, technology and transportation. Some polytechnics offered a joint training field in technology and transportation plus social welfare and health care. It is not clear to us to what extent the working life exponents were consulted in the final selection of the training programmes. A further training programme in competence management was later launched in the field of technology and transportation. This was introduced partly to improve the regional distribution of the experiment and to strengthen the role of technology and engineering in the experiment (OPM 7.2.2003).

3.3.2 Meeting the needs of working life

In our visits to Finland it was clear that despite the wide involvement of the employment sector in preparing for the launch of the polytechnic postgraduate programmes, there was some controversy about the need for them. The
representative of at least one national organisation flatly stated to us that they were not needed. His position was, amongst other things, based on the perception that working life does not need postgraduate polytechnic degree holders. Instead working life would prefer short non-degree courses offered by polytechnics for their Bachelor’s degree holders. Similarly, Pyökäri and Huttu (2003: 59) conclude that the messages from working life differ. Some are strongly against the postgraduate degrees and some are very positive and support them. Some working life representatives state that there is a need for professionally oriented experts, while others argue that there is a need for academically educated top experts. A representative from the Union of Professional Engineers in Finland (Saarikangas 2003: 55) states that there is a need for a practical postgraduate degree programme, which is based on the needs of working life to complement existing university studies. Furthermore the Union wants postgraduate polytechnic programmes which are suitable for all engineers regardless of their specialist field.

We ourselves detected some confusion in the debate on this topic. A common error was to discuss polytechnic postgraduate programmes and university Master programmes as if they were meeting the same market needs. For example, a representative of a national employers’ association argued that there is no need for postgraduate programmes in the polytechnics, because polytechnic Bachelor’s degree students can go on to university Master courses. Yet, they are quite remarkable differences between the programmes. The polytechnic postgraduate programmes are in principle aimed at students who are already in the labour market, and who have been there for some time. The university Master programmes (with the exception of the few part-time post experience courses) are in principle for entrants to employment. The former is part-time, the latter full-time; one is designed for labour market needs, the other is academically based. A number of respondents expressed concern that too many postgraduate degree holders would be produced in relation to labour market needs. However, it is not clear to us how this conclusion can be reached with respect to the polytechnic postgraduate degree holders, since these graduates are already meeting labour market needs in that they are already employed. There is of course the question of whether the additional learning they gain from their programmes is needed, but debate on this issue too is wrapped in confusion because the identification of labour market needs for part-time, post-experience programmes cannot be done in the same way as for programmes for initial entry to the labour market.

For one thing, the demand of students themselves for the programmes is an important indicator of labour market needs, in a way that demand for first degree programmes is not. Unlike most entrants to undergraduate pro-
grammes, these students, because they are already employed, bring an informed understanding of their needs for learning in the context of their employment, and of the workplace or professional problems that will form the basis of their projects. It is at least as valid to consider their demand for places in these programmes as an indicator of the needs of working life, as using the estimates of employers of numbers of postgraduates needed in the future as an indicator. As one respondent put it, increasing the level of education increases the level of the industry. Similarly, the fact that the students identify, usually with their employers, a work-based project for their Master’s thesis is a further indicator of the needs of the market. Even the sceptical employers’ representative (mentioned above) accepted that increased co-operation between polytechnics and industry has been a positive outcome of the postgraduate programmes.

The motivation of students entering these programmes is also worth noting. Few students start a postgraduate polytechnic study with the explicit intention to move to a new job (which would have significance in relation to the total numbers entering the labour market). Instead, our discussions with students suggested that most seek to improve their professional knowledge, skills and understanding in relation to their current employment, and to enhance their own performance and that of the workplace or profession with the thesis project. These findings echo those of UK students on similar programmes, reported by Pratt et al. (1999).

This dedication and motivation of students has been highlighted in the survey carried out by the follow-up group: “The respondents estimated that they dedicated an average of 48 hours per month to their studies. Half the respondents employed less than 40 hours for the studies, 1/3 41—79 hours and the rest more than 80 hours every month. Studying was done on every day of the week, yet mostly during the end of the week. Friday was a study day for 60% (n=204) of the students, Saturday for 72% (n=243) and Sunday for 51% (n=171). However, most students, or 69% (n=232) studied mainly in the evenings” (Okkonen 2004: 9). These motivations indicate that the main contribution of the programmes is to enhance personal and organisational performance in existing employment.

It was also clear from the students that we met studying on postgraduate polytechnic business programmes where there are obvious alternative programmes, such as MBA programmes, that they were conscious of making a genuine choice in a market. Many students had considered, but rejected alternative programmes, amongst other things, because these did not meet their own development needs or those of the workplace or profession, or because they were unwilling to pay the (high) tuition fees of the MBA programmes.
All this means that the identification of labour market needs for these programmes is both complicated and simplified. It is complicated because overall estimates about the needs of economic sectors cannot easily be made; the needs are identified at a much more local level. This offers support to the idea of a ‘bottom up’ approach to the demand for – and hence supply of – places. *We find it reasonable for the Government to take a more relaxed view about mechanisms to control numbers of places for these kinds of programmes.* The students – as ‘consumers’ – are in general closer to and better informed about market needs than are entrants to full-time programmes leading to initial entry to employment. Whilst the Government must inevitably determine the total amount it wishes to spend on any sector of higher education, we would encourage it to let the total number of postgraduate polytechnic places it wants to fund be determined in large part by demand for places, subject to constraints on minimum numbers (on grounds of efficiency) and conformity to overall requirements about the nature of the programmes. We set out our proposals for ways of achieving this in Chapter 4.

### 3.4 Lessons from the experimental programmes

The interim report on the postgraduate degree experiment from FINHEEC (2004: 25) concluded that there seemed to be a need for postgraduate degree training in the working life sector, albeit in some fields the experiment was not familiar. The interim report noted (FINHEEC 2004: 20) the ways in which employment sector connections can be organised in the polytechnics. It stated, for example, that “The polytechnics have developed various modes of operation to commit the employers of their students and to promote their guidance. Some training programmes even required that the student’s employer signs a contract for the implementation of the development task at the workplace. Almost half of the programmes reported that each postgraduate student had an appointed mentor at the workplace, responsible for the guidance of the development work, while some training programmes reported about a tripartite model of guidance and evaluation of the development task: teacher – workplace mentor – student” (FINHEEC 2004: 21).

The theses that the postgraduate students prepare were found to be a good way to connect with working life. They could be linked to regional R&D projects and thus enhance networking. In certain programmes the teachers’ personal contacts were found to be a major channel for employment sector contacts. Employment sector orientation was enhanced by steering groups or advisory committees with representatives from the employment sector. About half of the training programmes conducted surveys concerning
the competence and needs of the employment sector during the planning of the training programme.

Another way of enhancing the involvement of working life used by the polytechnics is to include representatives in planning the contents of the curriculum. Some polytechnics invite the employment sector representatives to lecture at the polytechnic. Some required written agreements on the thesis between employer, polytechnic and student. Some teachers visited the students’ workplaces and held discussions and informed the workplace on the postgraduate degree programme and its objectives. Some students formed project groups in their organisation and in this way involved more people from the employment sector to participate in the thesis. (FINHEEC 2004: 21.) In our own visits and discussions we found substantial evidence to support these positive findings of the interim report.

We also found that progress had been made with some of the ‘challenges’ identified in the interim report, notably as regards pedagogical issues and the need to further reinforce the teacher networking and the links of the polytechnics’ own R&D operations with the postgraduate training programmes (FINHEEC 2004: 25). We found examples of good communication within the institutes themselves regarding the postgraduate programme, development of employment sector contacts and knowledge of the teachers, improved pedagogic practices such as reciprocal visits, appointed mentors, written contacts regarding the thesis and joint guidance meetings.

It is clear from the experimental programmes that student demand has been patchy. A few programmes were not able to attract sufficient applications for the places available, and others, though they attracted enough applicants, found for various reasons they were not able to accept them, or that the applicants themselves did not take up the places. The main problems appear to have arisen in the rather narrowly defined programmes in social care.

A number of reasons have been put forward for this:

- It was unclear to potential students, and particularly to employers whose support they needed, what the programmes are about. The programmes were new, and their level, purpose and content were uncertain.
- It was a particular problem that the qualification/degree to which the programmes would lead had not been determined.
- Some programmes appear to have been designed to make sure that the polytechnic concerned had programmes at the postgraduate level, rather than to meet an identified market need.
- Some applicants – who had taken their first degrees as mature students – could not be accepted because their professional experience was before graduation rather than the three years after.
In some cases, the design of the programmes is ahead of the practice in working life. This appears to apply particularly to programmes in the social field. Here, it may be necessary to create the supply in order to create demand.

In some fields the nature and title of the programmes that could be offered were very narrowly defined. The interim report also noted that strictly defined competencies that are used in the Bologna convention do not fit in well in the Finnish education system, due to the relatively small population and work force in certain fields. (FINHEEC 2004: 41.)

It is likely that the programmes in business recruited better, because the specification covered a wider field of study and enabled students to enter from a wide range of organisations. Indeed, even though the programmes were directed at SMEs, there are also students in these programmes from the public sector and from large companies. Salminen (2003: 14) suggests that training programmes should combine their different fields of expertise so that the core contents of the training could build on several areas of expertise. In order to provide added value to the basic degree, there must be a multi-professional approach which widens the perspective provided by the basic degree (FINHEEC 2004: 40).

The current strictly outlined programmes do not allow for such new solutions (Salminen 2003: 14).

A number of points follow from this summary of experience of the pilot programmes. First, there is a need for further publicity by the polytechnics and the Ministry about the programmes. The clarification of their title in new legislation will help in this regard.

Second, the nature of the experimental phase and the problems like those mentioned above, mean that there are some difficulties in reaching definitive conclusions about future demand for these programmes. The limitation of the programmes to three fields means that there is no firm empirical evidence about the potential attractiveness of programmes in other fields. But, even though there were problems of recruitment in some of the existing programmes, it seems likely there would be a demand in other fields. Since the demand for programmes was also constrained by the narrowness of definition, it seems probable, too that there would be more demand for more widely based programmes and/or for programmes designed by the institutions to meet known market needs. We heard, for example, suggestions that programmes in the social field would have attracted more students had they been allowed to focus more on management issues. It is also difficult to extrapolate demand when recruitment to programmes has been restricted to two years, and then ceases.
Third, the group of potential students for the postgraduate polytechnic programmes has been relatively small until now, but will increase rapidly in the coming years. The enrolment conditions, i.e. having at least three years of work experience after graduation, implied that the experimental programmes starting in 2002 were only accessible for students who had started their undergraduate studies in or before 1995 in a polytechnic or in or before 1996 in a university, while the 2003 programmes were open to students that had started to study in or before 1996 in a polytechnic or in or before 1997 in a university. Obviously, the rapid enrolment growth in the polytechnic undergraduate programmes is from after 1996. Consequently, the coming years will see a rapid increase of polytechnics first cycle graduates who will become eligible for enrolling in a postgraduate programme. There are no indications whatsoever to expect that the growth in potential students will not lead to a growth in applications.

Fourth, these considerations confirm us in our view that control of programme titles and places can be relaxed. *We recommend that all polytechnics should be entitled to put forward proposals for postgraduate programmes in any field (and across fields) in which they already have degree provision.* We suggest that the permission to run programmes and the allocation of places to particular polytechnics should be by a process, rather than through prescription. However, we want to emphasise that such a process does not mean that all proposals for programmes would be approved. We set out our proposals in more detail in Chapter 4.

### 3. 5 The international dimension

The international dimension is a topic of general concern in education in Finland and it was raised repeatedly in our discussions about the postgraduate programmes in polytechnics. However, the discussion here appears to be somewhat confused. There are three different ways in which an ‘international dimension’ could affect these programmes and it is important to distinguish between them.

First, is the idea of *international comparability.*

The importance of international comparability of higher education qualifications is widely acknowledged in Finland, and it has been an issue in the debate about polytechnic postgraduate programmes. Are Finnish qualifications of the same standard as those elsewhere? Are Finnish degrees being recognised as being of the same standards as those elsewhere? This debate is particularly conducted in the context of the implementation of the Bologna Agreement.
Second is the international nature of – and international elements in – the curriculum.

Many respondents – employers, teachers and students – referred to the international nature of the economy and of knowledge. Most programmes contain ‘international’ elements of this kind. Courses taught in English are also often cited as essential to an international curriculum.

Third is the international market in higher education.

This relates mainly to the ideas that students can study elsewhere, that foreign students can study in Finland, and that successful graduates may seek employment or further studies abroad. Also this debate is influenced by the Bologna process and its underlying intention to create an Open European Higher Education Area.

The topics are related, but not the same. For example, international comparability is of importance in the international market, but it does not necessarily mean that there should be an ‘international’ curriculum, particularly courses taught in English. It is possible to have a degree recognised as comparable with others without being taught in English or containing ‘international’ elements. Equally, international comparability may be sought for other reasons than the desire to engage in the international market; it may be necessary for the recognition of the programmes within the country.

These distinctions have important implications for the postgraduate programmes. International comparability is an important issue for the programmes and their providers. It could be argued that the programmes are directed to the internal labour market and Finnish students, taught wholly in Finnish, and that therefore the name of the qualification awarded is not of great significance. This argument does not stand up in the light of the Finnish Government’s commitment to the Bologna process – even within Finland the status of the programmes has to be considered in terms of comparable programmes internationally. (We discuss this in more detail in Chapter 4).

Finnish adults who gain a Finnish part-time polytechnic postgraduate qualification need it to be comparable to a recognised standard for their own mobility at a later stage. The international standing of the Finnish polytechnics as institutions is also dependent upon their ability to offer courses comparable with those in other countries. We have heard from several institutional representatives that their polytechnic was deemed to be unattractive as a cooperation partner by other European institutions since it was not offering formal Master’s degree programmes. This does not only affect the chances of international cooperation at the postgraduate level, but also at the undergraduate level. Further, the nature and standard of work on the polytechnic post-
graduate programmes appear to be comparable with part-time, post-experience postgraduate programmes in other countries.

Nor can programmes mainly or wholly directed at Finnish students and the needs of Finnish working life ignore developments in the wider world. Even locally based courses need to take cognisance of the increasingly global economy and labour market, and of practice elsewhere. There should be some international element to every programme. Courses in English are judged useful for students who have no intention of leaving Finland. We noted the successful use of the Internet for accessing material on international literature and international experience. Other international components of courses include the use of foreign teachers and the option of short study visits (perhaps a week or two) (see below).

However, there are unavoidable limitations on internationalisation of content on these programmes. Many of our student respondents mentioned the constraints placed on them by employers and families, though some did undertake visits abroad as part of their work. It is unrealistic to think of student exchange at any substantial level as an obligatory element of a part-time programme, though optional (and probably quite short) study visits could be offered. It would be for individual programmes to decide what is appropriate (and practically feasible) for their students and employment field.

Finally, although stakeholders often referred to the international market in relation to these programmes, it is hard to see to what extent there is an international market in part-time programmes like those currently offered in the polytechnics. Working adults rarely travel internationally to study part-time. Students on these programmes are always likely to be almost exclusively Finnish (or foreigners who live and work in Finland). The programmes are not competing with similar ones provided in other countries. The international market in Master programmes is mainly for full-time second cycle courses, which the polytechnics currently do not offer.

However, we were frequently told of Finland’s need and wish to attract foreign students who would stay in Finland and contribute to its development. If the polytechnics are to contribute to this at postgraduate level (as the universities are now beginning to do), it almost certainly requires full-time postgraduate programmes. This raises complications, for example, of the nature of the dual system (in that the polytechnics would be entering a domain hitherto that of the universities), and of funding. Many of these programmes elsewhere are funded through tuition fees, either for all students, or for all non-EU students. In the latter case these programmes are a form of
‘educational export’. The Government should indicate whether or not it sees the polytechnics developing full-time postgraduate programmes in the longer term, and if so, whether these programmes are expected to serve mainly an international or a national student market.
4 Conclusions and future policy

It will be clear from our discussion in this report that we support the Government’s intention to legislate to make the polytechnic postgraduate programmes permanent. We now set out our recommendations for the implementation of that policy.

4.1 The status and name of the award

One of the most vexed questions that arose in our evaluation was that of the name of the qualification to be given on the successful completion of the programmes. The current legislation avoids this issue, and students are currently studying without clear knowledge of what qualification they will get. We regard this as an unsatisfactory state of affairs and one that should be resolved. The rapid transformations in European higher education are a clear concern for the Finnish authorities and other stakeholders. There is a recognition that whatever decision is made on the actual organisation of the postgraduate degree and on its denomination, it cannot be independent of the need for international recognition not only of the type of degrees being awarded – the content – but also of the type of institutions that are awarding them.

We have taken as a guiding principle the maxim of ‘equal awards for equal performance’, which means that the name of the award should be commensurate with the work done and the standard achieved, and comprehensible in the context of the name of awards for comparable work in other institutions. In this context, we have borne in mind also the commitment of the Government of Finland to the Bologna process and the implications of this for comparability. At postgraduate level, the issue resolves into one question: should the polytechnic programmes award the Master’s title? With respect to this issue, the statement made in the ministerial Education and Research Plan 2003–2008, that the postgraduate polytechnic degree will become an established degree with a clarified status with respect to the other higher education degrees (Ministry of Education 2004b: 45), is highly relevant.

The name of the degree to be awarded by the polytechnic postgraduate programmes is a controversial issue. Hitherto, the Master’s title has been re-
stricted to awards made by universities, and it is held by many to have a particular meaning or connotation – particularly a focus on ‘scientific’ knowledge. Some of our respondents felt that the title was inappropriate simply because the programmes in polytechnics are directed to the needs of working life.

In line with our maxim above, we make a distinction between the level of attainment and the focus or purpose of the study. A title such as Master’s is an indication of level of education. It is no more rational to argue that it is impossible to compare levels of attainment in polytechnics and universities, than it is to argue that levels cannot be compared in, say, physics and humanities. Universities in Finland (as elsewhere) give Master’s qualifications in these two disparate fields without any apparent problem.

Indeed we would go further. We occasionally were told that work on Master programmes in the universities is ‘higher’ in standard than that on the polytechnic programmes, because the one is ‘scientific’, the other practically or professionally oriented. Yet, there is no reason for believing that in general the problems of the advance of discipline-based knowledge – the focus of university studies, are any greater or more demanding of students than those faced in the world of work and the professions. ‘Real world’ problems are complex, ‘messy’ and usually require the application of a wide range of scientifically derived knowledge, often in difficult circumstances and constrained by time and resources. Moreover, the assumption that it is the university which generates knowledge and other institutions, such as polytechnics, which apply it, has long been contested (see, for example, Gibbons et al. 1994). In many fields universities are involved in knowledge generation and application ever since the development of specific research structures in the 19th century, as is, for example, demonstrated by the study of Gornitzka (2003) in Norway. In addition, much new knowledge is produced outside academia, for example, in the world of work.

On the basis of our evaluation of the content and level of the postgraduate polytechnic programmes we have no doubt that they are comparable in standard with Master programmes in Finland and elsewhere (see below and Appendix 6.2). They make a genuine contribution to both practice and to knowledge, and in some cases we have seen (which we accept are exceptional) go beyond the standard normally found in such programmes. We can see no justification for denying the polytechnics the name almost universally used for awards at this level. On this basis, we have no doubt that students who successfully complete the programmes should be entitled to a formal degree called Master’s (in Finnish maisteri). We assume that this title will be available to students who have already completed programmes before the new legislation is passed.
We now turn to the question of whether name of the qualification should identify the nature of the programmes or institutions in which it was gained. We did consider whether the award should have a name other than Master’s for this reason, but as put to us by one senior politician, there is already a ‘muddle’ over the names of higher education qualifications in Finland. We see no reason to add to this and in any case it conflicts with our conviction that the courses are at Master level.

It was put to us by a number of respondents that the name of the qualification should identify also the nature of the institution. Many respondents suggested that the name should be Master’s (AMK). We see no reason for the award to have this format. Since we believe that the programmes are comparable in standard with (though different from) those in universities, we recommend that the qualification be presented in the same way as those from universities. The format in these institutions is ‘Master’s in (subject of study)’. Thus a polytechnic student completing these programmes would gain a Master’s degree in the professional field. Examples might be Master in Welfare Practice, Business Practice, etc. The name of the field would need to be agreed in the approval process for the programmes and consistent with our recommendations about the breadth of the programme titles. Examples of such names in Finnish might be, for example, pitkääikaissairaiden hoidon maisteri, terveysteknologian maisteri, and yrittäjyyden maisteri.

The nature of the programme taken by the successful student would be further clarified by the Diploma Supplement that is an important part of the Bologna process. It is to this process that we now turn.

4.2 The Bologna process

There has been much discussion about requirements of the Bologna process for the title of the award in Finland. Here, as in some other areas that we have already noted, we have detected confusion. The discussion has centred on the length of time and number of credits needed for a Master’s award.

It is worth remembering that the Bologna Agreement is a not a law, prescribing that every country must have identical structures for its higher education qualifications. Indeed, “a rigid, uniform model... is neither desirable nor feasible in Europe” (Haugh and Tauch 2004). It is an agreement to facilitate understanding of comparability of qualifications. Its function is to facilitate dialogue, and guide change (op cit). It suggests a ‘common, but flexible frame of reference’ for qualifications (op cit).

There is, as we show below and in Appendix 6.1, no universal terminology nor one structure of studies across Europe. However, there is a general
trend towards introducing a three-cycle degree structure, and the use of the terminology ‘Bachelor’s’ and ‘Master’s’ degrees as generic terms for the qualifications from the first and second cycles. As Finland is a signatory to the Agreement, this implies that the new Act should recognise the reality that the polytechnic postgraduate programmes are genuine second cycle degree programmes, as understood by the Bologna Agreement, and can thus be expected to lead to the degree almost universally used for such programmes – Master’s. In other words, if the postgraduate degree structure in the polytechnics is going to be institutionalised after this pilot stage, Finland has to accept the consequences of having signed the Bologna Declaration: all formal second cycle degree programmes in the open European Higher Education Area in development, i.e. including the Finnish second cycle programmes, are expected to award a Master’s Degree.

While the overall direction of the implementation of the Bologna process is rather uniform throughout Europe, the situation concerning the nature of the Bachelor’s-Master’s degree structure is less homogeneous than often suggested. For example, the 3 (Bachelor) + 2 (Master) + 3 (PhD) structure that is presented as the agreed structure is not found in all countries nor in all sectors. For example, France has set up a new five-year ‘Mastaire’ degree that should fit between the present ‘Licence’ and ‘Doctorat’. There is also a project to set up a ‘Licence professionnelle’ as an equivalent to the Bachelor’s degree. In Sweden one of the Master’s degrees offered in the university sector is a 4-year degree, while in the Netherlands the Bachelor programmes offered by the polytechnics are by law 4-year programmes (240 ECTS credits). In addition only a limited number of formal, publicly funded Master programmes are allowed to be offered in the Dutch polytechnic sector and these are in general 60 ECTS credits. Most Dutch polytechnic Master programmes are post-initial programmes for which the institutions charge full cost tuition fees (currently between EUR 5,000 and EUR 15,000). The Dutch universities offer 5-year/3 + 2 (in engineering and natural sciences) and 4/3+1 -year (in all other fields) Master programmes and 4-year PhD programmes in all fields. Dutch polytechnic Bachelor’s degree holders are eligible to enrol in related university Master’s degree programmes, but the universities can, like their Finnish counterparts require additional study of them, while the Dutch polytechnic Bachelor’s degree holders normally do not get compensated for their 60 ‘surplus’ ECTS credits compared to the Dutch university Bachelor’s degree holders. Finally, the European Commission has indicated in its new Erasmus Mundus programme that it promotes the development of 18-month (= 90 ECTS credits) Master programmes throughout its member states.
There is also no definitive pattern in the distinction between ‘academic’ and ‘professional’ Master’s degrees. It is clear that both kinds of degrees lead to the title of Master. In Germany, the difference is indicated by the title: Master of Arts or Science refers to traditional academic degrees, Master of Engineering to professionally oriented degrees. Also in the Netherlands the university Master programmes award a Master of Arts or Science degree, while the Dutch hogescholen award a Master’s degree without any further formal addition to the title. Like our recommendation with respect to the degree to be awarded by the Finnish polytechnics the Dutch institutions indicate on the diploma in which field or discipline the Master’s degree is awarded. In Britain, degrees of both kinds have had the title of Master since at least the beginning of the polytechnic policy in the mid-1960s. Part-time professionally oriented Master’s in Britain are very similar in length, structure and, so far as we can tell, standard to those in Finnish polytechnics. The descriptors of Master’s degrees published by the UK Quality Assurance Agency for Higher Education (see Appendix 6.2) clearly show that professional as well as academic programmes can lead to the title of Master because of the kinds of skills, knowledge and competencies that are expected at this level.

So whilst there is a substantial orientation towards a common framework in Europe, there is a diversity in the way in which the 40 countries involved in the Bologna process implement it nationally. Especially the operationalisation of the agreed upon three-cycle higher education degree structure differs from country to country. Given this diversity the generalisation of the use of the ECTS credit system and of the Diploma Supplement are crucial. It appears that there is still much to be done to find a common agreement on what should be the required number of credits needed for a Master’s degree (Tauch and Rauhvargers 2002: 7). The tendency is towards second cycle Master programmes of 90 – 120 ECTS credits. The distinction between academic and professional degrees is an issue in some countries. A number of countries have opted for the creation of specific professional-oriented Master programmes. Tauch and Rauhvargers (2000) concluded that, despite some variety, there is a clear trend towards Master degrees requiring – in total – the equivalent of 300 ECTS credits, of which a minimum of 60 credits should be gained from post-graduate studies in the domain of specialisation. However, some countries, such as the Netherlands, Sweden, and Portugal, are at this stage not willing to give up the possibility of offering four-year (= 240 ECTS credits) university Master programmes in specific fields.

The Diploma Supplement becomes even more important when one is confronted with these different lengths of Master programmes (second cycle from 60 to 120 ECTS versus ‘all-through’ 240 to 300 ECTS) existing in par-
allel. Further, although the dominant entry requirement for second cycle Master programmes remains the undergraduate degree at Bachelor level, some countries extend access to those with less formal qualifications, especially taking into consideration the professional background of candidates.

The question of credits is thus confusing, and exacerbated in Finland because Finnish credits are different from ECTS credits. Moreover, and surprisingly, there is no formal ‘conversion’ rate of Finnish credits to ECTS credits. Some universities currently indicate in their diploma supplements that 1 Finnish credit equals 1.5 ECTS credit while others indicate that 1 Finnish credit equals 2 ECTS credits.

The Bologna process has generated the following suggested frame for reference for the minimum length of study at Bachelor and Master level (one academic year corresponds to 60 ECTS):

- Bachelor: ‘no less than 3, no more than 4 years worth of ECTS credits’.
- Master: ‘about 5 years worth of ECTS credits, of which at least 12 months worth of Master-level credits’.

Thus, the suggested, but not generally accepted, figure is that about five years of ECTS credits, that is 300 ECTS, are required for a Master’s degree. In a two-cycle system, like that towards which Finland is now moving, this total would normally be composed of 180 credits (3 years x 60) in the first cycle (Bachelor) and 120 (2 years x 60) in the second cycle (Master). As indicated, there are a number of countries with one-year Master programmes in specific fields.

In Finland the arithmetic is more complicated (in part because Finnish credits are not yet the same as ECTS). Whilst Finnish university first cycle degrees are expected to consist of 180 ECTS credits, polytechnic first degrees have 140 or 160 Finnish credits, which equal 210 and 240 ECTS – the larger numbers reflecting the longer courses in polytechnics (3.5 and 4 years respectively). (In music, even, the courses are 4.5 years and 270 ECTS).

The current temporary legislation defines the postgraduate polytechnic programmes as of 40 to 60 Finnish credits (= 60 to 90 ECTS, equivalent to 1-1.5 years of study). This implies that these programmes fulfil the ‘minimum requirements’ (= 60 ECTS credits) with respect to European Master-level programmes referred to above. Given that the polytechnic first degree programmes represent 210 to 240 ECTS credits the total number of ECTS credits earned by a polytechnic postgraduate degree holder with a polytechnic first degree can range from:
Polytechnic 3.5-year degree: \(210 + \text{polytechnic 1-yr. PG programme: 60} = 270\).

Polytechnic 3.5-year degree: \(210 + \text{polytechnic 1.5-yr. PG programme: 90} = 300\).

Polytechnic 4-year degree: \(240 + \text{polytechnic 1-yr. PG programme: 60} = 300\).

Polytechnic 4-year degree: \(240 + \text{polytechnic 1.5-yr. PG programme: 90} = 330\).

In addition, since polytechnic postgraduate programmes are open to university graduates, the formal credit point calculation for university graduates are:

University 3-year degree: \(180 + \text{polytechnic 1-year PG programme: 60} = 240\).

University 3-year degree: \(180 + \text{polytechnic 1.5-year PG programme: 90} = 270\).

This implies that there will be a relative large diversity in the number of credits that is formally earned by the polytechnic postgraduate degree holders in their path towards the final postgraduate degree. This is not unlike the situation in many other European countries where a comparable variety exists depending on the specific track a student has followed towards his/her ‘second cycle degree’.

A number of issues arise from this. First, if this is to be the basis of the calculation of credit equivalence, it sits awkwardly with current legislation which defines the polytechnic degree as a first degree in the Bologna context, equivalent in standard to a university degree. In this definition, polytechnic Bachelor’s degree holders have earned 30 or 60 ECTS credits more than their equivalents in the universities. The interim report records that there is no supported proposal to reduce the polytechnic degree to the minimum Bologna requirements (FINHEEC 2004: 40).

Again, this is not unlike the situation in other countries, e.g. the Netherlands. However, if these extra credits are to count towards a Master’s award, then there may be a need to register or record them in some formal way – for, in effect, these students enter the postgraduate programme with ‘advanced standing’ compared to the university Bachelor’s degree holders. Consideration may need to be given to whether this requires provision in the legislation.

The question can indeed be raised whether the overall variety in formal credits earned of polytechnic postgraduate degree holders requires specific provisions. This question can be addressed in two ways. The first option is to accept that the level of competencies and skills of all graduates from the pol-
The technical postgraduate programmes represents the attainment level expected internationally of second cycle programmes, independent of the formal number of credits earned. This would imply an acceptance of the diversity and of the argument that 'Master's' level of skills and competencies in working life oriented programmes is not only determined by credits earned, but also by actual work life experience (see next point below).

The second option is to require extra academic work of those students accepted to enter a postgraduate polytechnic programme with an insufficient number of credits earned (this can range from 30 to 60 credits). In addition, students who have earned too many credits (30) could, for example, be compensated by exempting them from half a year of academic work.

In our view it is obvious that the first position is to be preferred. We feel that the second option overemphasises the value of formal academic requirements for work-oriented programmes, it bureaucratises the application procedures and practices with respect to the programmes, and it forces the institutions to enlarge their administrative capacity. Our talks with the students, teachers and other actors involved in the programmes during the evaluation have taught us that it is not in the first place the initial degree work, but the actual work experience gained after graduating that provides the postgraduate students with the necessary skills and competencies basis required to start and successfully complete the postgraduate studies. What are the arguments underlying this conclusion?

It can be argued that the apparent discrepancy between universities and polytechnics in credits at the second cycle stage arises because the working life experience of polytechnic students is not recognised. It has been suggested that the prior work experience of entrants to polytechnic postgraduate programmes should be formally accredited. The Government should consider, with other stakeholders, whether this is a development it wishes to pursue. We do not believe that it is essential for the legitimation of the programmes, but it is legitimate for students to be credited for achievements gained in different ways. The processes of accreditation of prior learning and experience are well established and familiar in Finland and could be developed to do this.

A further possibility is to re-consider the credit rating of the postgraduate programmes themselves. Although they are currently part-time, some of the students' time in the workplace is part of the study programme. The development of the thesis project and the work on this project include a substantial amount of time in the workplace, which the current credit ratings may not fully recognise. It would be possible to define the programmes in terms of workplace time as well as formal study time. Again, we do not be-
lieve that this is an essential measure, on the grounds that the standard of work already justifies the award.

The definition of the polytechnic postgraduate programmes as leading to Master level has implications for transfer between the sectors in the dual system. We detected some further misunderstandings in the debate on this topic. The Bologna process identifies broad levels of comparability. It does not mean that holders of a qualification recognised at one level (such as Bachelor's or Master's degree) have automatic entry to a programme at the next level (such as Master's or doctoral). However, they would be eligible for entry, though the university or polytechnic in question may well require additional courses of study for the course in question to ensure comparability in specific areas of learning. (It may be helpful in this regard to make the distinction between ‘general’ and ‘specific’ credit used, for example, in Britain).

In the context of the Finnish dual system, the OECD (2003) report formulated the principle of maximum individual mobility and minimum institutional mobility and this has been recognised as a guiding principle in the Ministry of Education (2004a). Whilst, as the interim report (FINHEEC 2004: 39) notes, ‘it is impossible to envisage a direct transfer’ (our italics) from one sector to the other, it is possible (and we think desirable) to envisage ‘conditional’ transfer between sectors. The applicant’s competence and the suitability of the prior degree would be evaluated on a case by case basis, and supplementary studies or experience specified where necessary. This already happens for entry to a university Master programme by a polytechnic graduate. The University Act currently being devised limits the range of additional credits that can be required by individual university Master programmes, in the light of the Bologna Agreement. In future, we can envisage that some polytechnic postgraduate programmes might want to introduce specific entry requirements for university Bachelor’s degree holders. In addition, we assume that if the polytechnic postgraduate programmes indeed will award their graduates a Master’s degree, these degree holders will have the same rights concerning the entry to university doctoral programmes as university Master’s degree holders. Again, this principle does not guarantee access, it only expresses the equality of both types of Master’s degrees when it comes to access rights. It will be up to the individual doctoral programmes to decide which Master’s degree holders they want to accept.

A further implication of the title of Master is for entry to teaching in the polytechnics and for salary levels in polytechnics and elsewhere. It follows from our recommendation about the name of the award that holders of the Master’s from a polytechnic will have equal standing with holders of a university Master’s degree for entry to teaching posts in the polytechnics. Not only does this
follow on grounds of equity of treatment for holders of comparable qualifications, but it will have significant benefits in the perceived status of the polytechnic Master’s degree, and eliminate what the OECD (2003) report felt was a serious problem to the development of the polytechnic sector. At present, the route to enter teaching in polytechnics is via a university qualification; it is a requirement that polytechnic teachers have a university Master’s or doctoral degree (there is provisional for ‘knowledgeable’ people without these to enter, but this is not extensively used). This implies that at the moment polytechnic first cycle graduates have to go to a university if they wish to become polytechnic teachers. Having the polytechnics Master’s as an entry qualification will increase the range of teachers in polytechnics to those with polytechnic degrees and university graduates who have working life experience and a polytechnic Master’s. By a similar argument, we see no grounds for excluding those with a polytechnic Master’s from employment grades and salaries currently available to holders of university Master’s qualifications. This is in line with other findings brought forward in the follow-up report (Okkonen 2004, 2).

We recognise that this may have significant implications in some fields for the structure of the profession and costs, and suggest that the Ministry of Education may need to alert the other ministries concerned to these implications. The Government should consider whether existing legislation needs to be amended or new legislation is needed to recognise the equivalence of the Master’s degrees in the two sectors.

4.3 Steering and funding

We recorded in Chapter 2 our support for the maintenance of the dual system, but we noted the need for a wide range of policy instruments to be used to support it.

The purpose of a dual system is to maintain diversity and to prevent the otherwise inevitable domination of one established tradition. It is a kind of ‘ideal model’ (comparable with ‘rational’ models of policy making); it is a construct that helps to define the intellectual/educational ‘map’ and the institutional landscape. It is important to ensure that all parts of the map are not static but dynamic in the sense that they can further develop within agreed upon general frameworks. Whilst the polytechnic sector may need nurturing to ensure that it avoids ‘academic drift’ and remains directed towards the needs of working life, it is equally important to maintain the integrity of university education, discipline driven and concentrating on the generation of scientific knowledge. The key to maintaining diversity in a dual system is to limit institutional mission drift.
This has a number of implications. First it is, of course, recognised that the distinctions between the two sectors can never be absolute and there will be some overlap of activities at the margin. Even the most theoretical or academic studies may have a practical application; many academic studies, e.g. in medicine, dentistry, law and engineering, are preparing students directly for working life; the needs of working life may prompt highly theoretical research; programmes directed at the needs of working life have to draw on theory. Cooperation between the sectors is likely to occur, and is indeed desirable. We therefore support the cooperation that has developed between universities and polytechnics, where this is genuinely between equal partners. We would support the further development of this kind of cooperation, perhaps through increased use of information technology. We can envisage higher education institutions forming a ‘network Finland’, comparable to the ‘network Norway’ developed in the 1990s (Gornitzka et al. 2001). Such a network would, amongst other things, increase the transparency of the programmes offered at polytechnics and universities; it would allow for a more flexible transfer between the two sectors of credits students choose to take leading to a greater freedom for students to choose their own ‘study path’; and it would stimulate the regular exchange of information and consultation between the two sectors with the aim to come to an efficient ‘division of labour’ between the two sectors in the area of their programme offerings at various levels. The latter would, for example, imply that an institution would have to consult with other institutions first before introducing a new study programme.

The key issue in all of this, and particularly in the running of study programmes, is what might be called ‘ownership’. Whilst programmes in a polytechnic may draw on the resources or particular courses in the other sector, the ownership of the programme and the use to which those courses is put remain with the polytechnic (and vice versa for university programmes). For the students, the learning from these programmes is integrated into their own learning objectives formulated for the polytechnic programme, not those of the providing institution.

Second, the maintenance of diversity points to a need for relatively strong control of the development of the two sectors. This does not mean that the Government should seek to steer the development of the system in detail. With autonomous or semi-autonomous institutions, such as universities and polytechnics, diversity must be achieved by negotiation and agreement. This requires in a democracy consensus about the nature of the institutional landscape. It means that the starting point is to agree upon the main characteristics of the two sectors in teaching and R&D (the California Master Plan is an example of such a statement). We do not envisage this as a major problem in Finland. We
have already noted the broad consensus accepting the existence of a dual system. In the light of the developments taking place in the framework of the Bologna process, university and polytechnic laws should state that universities and polytechnics both are expected to offer initial first cycle (undergraduate) degree programmes, i.e. Bachelor’s degree programmes.

Furthermore, the distinction ‘working life oriented’ versus ‘scientifically based’ seems to work well at the Bachelor level, and we believe it should be extended to second cycle level. At this level, however, we believe that there should be a distinction made between initial second cycle degrees (i.e. those normally taken in universities directly after a Bachelor’s degree) and post-initial (post experience) programmes like those currently offered by polytechnics.

Once such an agreement has been reached, we envisage a rolling programme of negotiations with the Ministry on the mission and development plan for each institution. It is likely that such negotiations will require agreement to be reached between universities and polytechnics in the same region about the fields and programmes in which they will specialise (and not encroach on the other’s specialisations) and on cooperation where this is appropriate. A possible model for reaching such agreements has been suggested above under the name ‘network Finland’, referring to the cooperation structure developed in Norway in the 1990s. Also in other countries, for example, New Zealand (Brook, 2001) there are models for reaching voluntary agreements between institutions. It is possible that the Ministry may need to take a firm line in these discussions if one or other institution is reluctant to accept the validity of the other’s activities in a particular field or kind of programme.

The agreements reached in these negotiations can then form the basis of government funding. We discuss funding mechanisms in more detail below. For now we can note that various forms of input based or output based funding can still be used within this overall framework. However, if the institutions’ development plans are the basis for public funding of higher education, a wholly formulaic funding system may not be appropriate; judgements may be made to adjust the funding generated by formula for specific reasons. In this sense the Ministry would act something like an investment bank, investing in the institution. Consistent with this view, and more specifically, the Ministry should make clear that it will not continue public funding of activities that are undertaken on the ‘wrong’ side of the binary divide, and would only fund cooperative activities between polytechnics and universities which show a fair balance between the institutions.

In relation to the programmes at which this evaluation is directed – at second cycle degree level – this implies that the Government should make clear
that the universities are expected to offer initial, research-based second cycle (postgraduate) degree programmes, and that other second cycle degree activities of the universities, e.g. post-experience, part-time Master courses, are not going to be funded by the Government. (By initial we mean full time Master programmes normally taken immediately or soon after a Bachelor’s degree). The Polytechnic Act should state that the polytechnics are expected to offer post-initial, working life oriented second cycle degree programmes, such as the present part-time and post-experience programmes, and the Government should make clear it will not fund initial second cycle programmes in polytechnics.

As discussed in Chapter 3.3 we recommend that all polytechnics should be entitled to put forward proposals for postgraduate programmes in any field (and across fields) in which they already have degree provision and that there should be a transparent and generally accepted process for the Ministry to approve or reject these proposals.

We recognise that the Government will wish to and needs to determine the total number of places it funds. It may wish to give some indication of the broad distribution of numbers of places between fields, taking into account the size and education level of the labour force in these fields, the output of the education system in these fields and particular policy developments. We would expect that these broad indications may be amended (they are not ‘targets’) in the light of experience and recruitment to programmes, and in the light of particular policy or other national considerations – simply responding to institutions’ proposals may not meet national or regional needs.

However, the evidence we discuss in Chapter 3.3 indicates that the Ministry should not prescribe the title or specific focus of programmes in any field. We would expect the titles of programmes to be broad rather than narrow, though options within programmes could identify specialisms. It would be for the institution to justify the nature and title of any postgraduate programme it wants to offer.

We would emphasise that the entitlement to make proposals does not entail approval of these proposals. Proposals for programmes would be approved – or rejected – by the Ministry or an independent body, against a number of general criteria. The generality of criteria is important, because of the variety of circumstances in the different fields and professions. The aim of the system is to enable flexibility in response to changing and complex circumstances.

A key criterion would be market needs – identified, for example, by employer support, evidence of changing practice, market conditions in industrial fields, etc. As noted above, some programmes may need to be provided ahead of demand – to stimulate supply and to promote change in working life practice.
The proposals for new postgraduate programmes should show how they relate to the needs of the region and to regional (and if appropriate national) development plans and policies.

Another important criterion would be that due account has been taken by the proposers of programme offerings by other providers in the region. Polytechnics may need to agree on topics or fields in which they specialise, and/or cooperative arrangements to make their expertise available to students from other programmes. Due account will also need to be taken of relevant expertise in the universities.

The quality, structure and content of the programmes would be another criterion. We echo here the proposal in the interim evaluation for the involvement of FINHEEC in this. In the interim report (FINHEEC 2004, 41) it is stated that the postgraduate polytechnic degree provides students with skills to develop working life as such – and not just one individual workplace. An important criterion for approval of proposals would be that they demonstrate that they will develop an appropriate range of these general skills and knowledge.

The proposals should also indicate the minimum numbers of students which the programme needs for financial and academic viability – and failure to recruit to these numbers would lead to cessation of funding. We note in passing the practice on some programmes of recruiting students only every second year may be a useful way to generate minimum numbers in any cohort and to ease workload on staff.

We recommend that these general criteria be included in the new Act. We note that they are similar to the criteria in the current Act for the approval of the experimental programmes. It would be important that this is an iterative process. We envisage an initial, relatively informal, stage in which indications are given to institutions that it is worthwhile spending time and resources on developing a programme. It would pointless and wasteful to spend two years developing a programme which is unlikely to be approved for funding.

A final issue for consideration in this is the imbalance between the current programme approval practice in the polytechnics and the high level of autonomy concerning postgraduate programme development in the universities. While the polytechnics have been practically prescribed in which (narrow) areas they can develop their first postgraduate programme proposals, individual universities are in practice more or less free to determine within broad frameworks which Master programmes they want to offer. Also with respect to this issue the introduction of the ‘network Finland’ model could be a way forward, i.e. a way to create a more balanced procedure for coming to an efficient and effective division of labour between the two sectors.
4.3.1 Funding mechanisms

The question of funding mechanisms for the polytechnic postgraduate programmes cannot be considered in isolation. It needs to be addressed in the context of the issue of the total funds available, and of funding mechanisms in the rest of the polytechnic sector, and in the university sector. Other considerations include the need for stability in funding, but also for incentives that promote development of institutions in line with overall higher education policy.

It is clear that the total funds available in Finland for higher education are unlikely to increase. Government policy is predicated on this. If a postgraduate degree structure in the polytechnics is to be institutionalised, then there is some need to redistribute the existing funds. In fact this has already been the case for the experimental postgraduate programmes, which have been funded out of the adult education budget. The assumption of the current funding policy is that demographic changes will release some funds currently allocated to initial higher education, and that the development of postgraduate programmes will reduce the need for some of the specialist shorter programmes currently offered. We think that this last assumption may be a little optimistic. Whatever the case may be in this regard, we do not believe that the postgraduate polytechnic programmes can be funded in the long term by short term expedients such as those used for the experimental period. *We recommend that the postgraduate polytechnic programmes should be funded as part of the mainstream funding of the polytechnics in the future.*

There are arguments both for and against the idea that both sectors in higher education should have the same funding mechanism. It is often argued that the sectors should be funded in the same way, on grounds of equity. Otherwise, the argument goes, one sector is likely to be favoured by a distinctive funding regime over the other. How is it possible to sustain the notion of ‘different, but equal’ if the funding mechanisms are not comparable? On the other hand, since the two sectors have different aims and a mix of different kinds of programmes and activities, there is a case for arguing that different funding mechanisms are necessary to fund these activities appropriately. It could be further said that identical funding mechanisms are likely to damage the duality of the dual system.

It is clear that there is a need for reasonable stability in funding. Higher education, even that designed to respond quickly to changing needs, is a slow process. The postgraduate programmes take time to develop and last for two, three or more years. Whilst student numbers may fluctuate annually, the institution needs to maintain its critical mass of staff and expertise.
The question of the incentives offered by funding regimes is crucial to the successful development of programmes, and also to the development of policy, and particularly to the maintenance of the dual system. At present funding mechanisms can be either input or output-based, or consist of a mixture of input and output-related parameters.

Input funding supports the services provided by the institution. The existing programmes in polytechnics are mainly funded by input funding. Polytechnics annually receive funds based on the number of places that they offer. The funds are weighted by field of study, and for part-time and full-time study, etc. This is true at both undergraduate and postgraduate level. The main incentive associated with input funding is its tendency to encourage expansion: the more students enrolled, the greater the funds. On the whole, it does not much enhance efficiency, because funding has already been received for students who do not complete a year of study (though equally, the polytechnic has had to provide the teachers etc anyway).

Output funding is much more directed to rewarding efficiency. The universities are currently funded for their teaching by this method. In 2004 the component of the core funds reserved for education (comprising 44% of the core funds) was based on their numbers of second cycle graduates, i.e. the target set for Master's degrees (coefficient 2/3) and Master's degrees conferred (coefficient 1/3) (Ministry of Education 2004b: 10–11). These funds are also weighted for field and mode of study. The incentive is to retain students and to expedite their successful progress through the programmes.

There are some anomalies when students enter universities with credit from study previously undertaken at polytechnics. The university gets the full funding when they graduate although it did not provide all the students’ education. This issue of cross-sector transfer could arise more frequently with the further development of postgraduate programmes in polytechnics. As part-time post-experience postgraduate programmes tend to have high unavoidable dropout (because of job changes, circumstances in students’ family lives, etc, over which the polytechnic has no control), the sole use of output funding would not be wise. (Although the dropout from these programmes is currently low, it is unlikely to be sustained as the programmes develop).

Therefore, we recommend that postgraduate polytechnic programmes should be funded by a mix of input and output funding. It would be for the Government to decide the exact ratio of these funds. Assuming that also the future funding model will be using a unit cost system, the appropriate unit costs would be weighted by field of study and the Government should consider whether a higher level of funding than for undergraduate programmes may be appropriate for study at
We noted earlier the high demands placed on staff by the programmes.

We further suggest that the Government may wish to investigate, in the longer term, a system partly or fully consisting of credit-based funding. This might more closely match the nature of these programmes, but also might be relevant to funding of other programmes in both sectors, as the Bologna process with its emphasis on credits will be fully implemented from 2005 on. Credit-based funding is also likely to be a useful approach to funding lifelong learning as students enter and leave higher education intermittently at various moments throughout their lives.

Further, as we noted earlier, we recommend that the Government should announce its intention to cease funding of activities that are not appropriate for a particular sector in the dual system. The most obvious current examples of this are the part-time postgraduate programmes in universities funded by the ESF.

Another issue concerns the funding of the R&D activities related to the thesis work of the postgraduate polytechnic students. In general the R&D activities of the polytechnics are funded through the project-funding component in the government funding system of the sector, as well as through external funds. The latter, containing in addition to R&D funds mainly funds for continuing education services, amount to 22% of the overall polytechnics budget (Ministry of Education 2004b: 16). For the future adaptation of the polytechnic funding system we would like to stress the following starting-point. For the funding of their R&D activities the polytechnics should also in the future rely on project funding coming from the Ministry of Education and external funds. In line with the dual distinction discussed earlier in this report, this implies, amongst other things, that the public funds for basic research distributed by the Academy of Finland should not be used for funding the R&D activities of the polytechnics.

In addition, the thesis work and the related R&D activities of the postgraduate polytechnic students are in most cases directly beneficial to the students’ employers. Therefore we would expect that in the debates on how to fund in the future the postgraduate polytechnic programmes the possibility of employers covering parts of the study costs of employees enrolled in such a programme will become an issue.

We realise that at the moment many employers contribute already indirectly, i.e. in a capitalised way, to the costs of the programmes, for example, by allowing their employee-student to take classes, study literature, prepare papers, and work on their thesis during working hours. However, such contributions are not general, in the sense that we have also heard of cases where
the employer was less convinced of the value of the study, implying that the student was less supported, and could only study in her/his own time, e.g. by taking up holidays, or unpaid leaves of absence for following lectures. In addition, one can in general raise the question whether it is fair to use only public funds for financing programmes that are so obviously focused on and directly linked to the needs of the working life. Not only the individual students benefit from the programmes, but in practically all cases also their employers.

Finally, an issue related to the previous one, i.e. the issue of the property rights of the student’s thesis work and its outcomes. In other countries, notably the USA (Slaughter and Rhoades 2003), higher education institutions and responsible governments have developed the last decade specific regulations and policies to handle the issue of who owns the findings of academic work, including students’ thesis work. This is not the case in Finland. However, especially in the case of the work related thesis work of postgraduate polytechnic students it might be expected that situations occur where the question “Who owns the product or knowledge produced by a postgraduate student?” will be of relevance. Is it the institution, the student or the employer of the student who can claim ownership of the knowledge or product in question, and the commercial exploitation of it? Since this is an issue that goes beyond the focus of this evaluation we will not make specific recommendations. However, we do want to ask the Government to consider looking into this issue and develop the necessary policy debates and regulatory framework for handling future property right cases.

4.4 Summary of conclusions and recommendations

*The dual system*

- The future development of the polytechnic postgraduate programmes is important because of their implications for the future development and structure of higher education in Finland as a whole.

- The development of postgraduate programmes in the polytechnics and other changes have raised questions about the ‘institutional landscape’ of higher education in Finland and about the maintenance of the dual system.

- We have found that that there continues to be a widespread commitment in Finland to a dual system of higher education, with the polytechnic sector concentrating on activities broadly directed towards the
needs of working life, and the universities focussing on more ‘scientific’ education and research.

- We support the Government’s commitment to a dual system in higher education.
- Maintaining a dual system requires the creation of a policy environment which promotes rather than hinders the development of distinctive institutions. It is important to ensure that the full range of policy instruments available is used consistently with the policy.

The programmes

- We support the Government’s intention to legislate to make the polytechnic postgraduate programmes permanent.
- The programmes are comparable in standard with similar post-experience, second cycle degree programmes in other countries.
- Students who successfully complete the programmes should be entitled to an award called Master (maisteri).
- The qualification should be presented in the same way as those from universities (Master’s in the field of professional practice).
- The credits for polytechnic postgraduate programmes meet the Bologna requirements.
- The Government may wish to develop with other stakeholders the accreditation of prior learning in work experience of students entering polytechnic Master programmes.
- We recommend that the future law should permit mature students who have relevant work experience before their first degree studies, exceptionally to enter after a shorter period from graduation.
- The Government may wish to support the development of e-learning processes more widely.
- Whilst variations in practice are often appropriate to cope with different circumstances, it will be important for polytechnics to review what is best in the light of their own and others’ experience.
- We recommend that all polytechnics should be entitled to put forward proposals for postgraduate programmes in any field (and across fields) in which they already have degree provision.
- It will important to ensure that the high standard of these programmes is maintained in future and a similar standard is established in programmes in other fields. FINHEEC will have an important role here, as will the networks being established of teachers and planners in the polytechnics.

- We detected some confusion in debate on the needs of working life for the polytechnic postgraduate programmes. Polytechnic postgraduate programmes and university Master programmes are not meeting the same market needs.

- The demand of students themselves for the polytechnic programmes is an important indicator of labour market needs.

- We think it reasonable for the Government to take a more relaxed view about mechanisms to control numbers of places for these kinds of programmes.

- We found good links of the programmes with the employment sector

- Some programmes were not able to attract sufficient applications for the places available

- It was unclear to students, and employers what the programmes are about and a problem that the qualification to which the programmes would lead had not been determined.

- In some fields it may be necessary to create the supply of programmes in order to create demand.

- In some fields the nature and title of the programmes that could be offered was very narrowly defined.

- There is a need for further publicity by the polytechnics and the Ministry about the programmes

- There is confusion in the debate about the ‘international dimension’.

- We encourage some international element in the programmes. It would be for individual programmes to decide what is appropriate for their students and employment field. However, there are unavoidable limitations on internationalisation of content because of their part time nature.

- The Government should indicate whether or not it sees the polytechnics developing full time postgraduate programmes in the longer term.
Holders of the Master’s from a polytechnic should have equal standing with holders of university Master’s degree for entry to teaching posts in the polytechnics.

Holders of a polytechnic Master’s should have access employment grades and salaries currently available to holders of university Master’s qualifications.

The Ministry of Education may need to alert the other ministries concerned to these implications for salary and structure in some professions.

The Government should consider whether existing legislation needs to be amended or new legislation is needed to recognise the employment equivalence of the Master’s awards in the two sectors.

**Steering and funding**

- We support the cooperation that has developed between universities and polytechnics, where this is genuinely between equal partners.

- We would support the wider development of this kind of cooperation, perhaps through increased use of information technology.

- The starting point for future institutional development should be agreement upon the main characteristics of the two sectors in teaching and R&D.

- There should be a rolling programme of negotiations with the Ministry on the mission and development plan for each institution.

- The Government should make clear that the universities are expected to offer *initial*, research-based second cycle (postgraduate) degree programmes, and that other second cycle degree activities of the universities, e.g. post-experience, part-time Master courses, are not going to be funded by the Government.

- The Polytechnic Act should state that the polytechnics are expected to offer *post-initial*, working life oriented second cycle degree programmes, such as the present part-time and post-experience programmes, and the Government should make clear it will not fund initial second cycle programmes in polytechnics.
All polytechnics should be entitled to put forward proposals for postgraduate programmes in any field (and across fields) in which they already have degree provision. However, the entitlement to make proposals does not entail approval of these proposals.

The Ministry should not prescribe the title or specific focus of programmes in any field.

Proposals for programmes would be approved – or rejected – by the Ministry or an independent body, against a number of general criteria, including:

1. Market needs.
2. Due account has been taken of provision by other providers in the region.
3. The quality, structure and content of the programmes.
4. Minimum numbers of students which the programme needs for financial and academic viability.

These criteria should be included in the new Act.

The postgraduate programmes in polytechnics should be funded as part of the mainstream funding of polytechnics in future.

The postgraduate programmes should be funded by a mix of input and output funding.

The Government should consider whether a higher level of funding than for undergraduate programmes might be appropriate for study at this level.

The Government may wish to investigate, in the longer term, a system partly or fully consisting of credit-based funding.
5 References


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APPENDIX 1

Developments with respect to Second/Master’s Degree Structures: Finland compared with other Nordic Countries and the Netherlands

Peter Maassen

Background

Governmental steering of higher education in Europe has undergone remarkable changes over the last 10 to 15 years. The Treaty of Maastricht (1992) marked in many respects the end of the ambitions of the European Commission to develop a European-level higher education policy. In Article 149, 150 it is indicated that education (incl. higher education) is a national responsibility. This implies that the European Commission (EC) can only undertake actions with respect to higher education that are subsidiary to the national activities and policies of the individual Member States of the EU. At that time, the diversity of higher education in Europe was seen as a great good and the EC was allowed to stimulate cross-boundary cooperation, not harmonisation.

The current situation in European higher education clearly reflects a different political agenda, one of creating an open European Higher Education Area (EHEA). This is the consequence of agreements between national governments, within and outside the EU structures. The names of the cities where the agreements were reached, Bologna and Lisbon, have been identified with ambitious intentions as regards the Europeanisation of higher education. ‘Bologna’ (and the subsequent meetings in Prague and Berlin, as well as the coming meeting in Bergen, Norway) stands for the voluntary agreement between (now) 40 European nation states to take away the structural barriers to the creation of an open European higher education area. ‘Lisbon’ represents the EU’s strategic goal of sustained economic growth, more and better jobs and greater social cohesion with far-reaching effects in many areas, including higher education. In addition, the recent enlargement of the EU affects the policy discussions about cross-border cooperation in higher education in Europe, and the related need to homogenise existing higher education structures. To put it simply, Bologna has led to a homogenisation of national higher education structures and Lisbon is beginning to have a harmonising effect on national policies.
The year 2010 features prominently in the Bologna as well as in the Lisbon process. The first aims at having established by 2010 an open European Area of Higher Education (EHEA), the second aims at turning Europe into the most competitive knowledge economy in the world by 2010. As indicated both processes have a homogenising or harmonising effect on higher education in Europe. For example, the introduction of a Bachelor’s/Master’s degree structure in all 40 countries that have signed the Bologna Declaration implies a homogenisation that in principle should make it easier for students to move freely through all involved higher education systems.

Finland, being part of the Nordic countries is located in an interesting region since the Nordic region includes three EU members and two EFTA members. In addition, a core element in the Nordic higher education cooperation structures (the Nordplus programme) was introduced in the late 1980s and it forms the only major programme in Europe besides ERASMUS/Socrates that stimulates and finances the cross-boundary mobility of students and staff. Therefore in this analysis the developments with respect to second (or postgraduate) degree structures in Finnish higher education are compared with developments in higher education in the other Nordic countries. From the perspective of the evaluation of the postgraduate experiment in the Finnish polytechnics, it is of relevance also to look at Dutch higher education, because amongst other things, the Dutch professional higher education sector, like the Finnish polytechnic sector, enrols the majority of the new students. In addition the new Bachelor’s/Master’s degree structure in the Netherlands resembles in a number of ways the new Finnish degree structure to be formally introduced in 2005.

Finland

Background

Currently, the structure of courses (as well as the legal form of the institutions and their funding and control mechanisms) in the two sectors of the Finnish higher education system differs significantly.

At the first degree level the universities offer three-year kandidaatti/kandidat degrees, and at the second degree level five-year maisteri/magister degrees, i.e. two years on top of the kandidaatti degree. This degree structure was introduced in the 1990s. The kandidaatti degree exam is, however, not yet compulsory for students who would like to take a maisteri degree. The students can continue straight on to the maisteri level without going through a second application procedure. Currently the kandidaatti degree has a low status on the labour market.
The polytechnic sector offers first degree programmes of three and a half to four years (140–180 Finnish credits, equivalent to 210–270 ECTS credits). A new professional second degree is currently under development. The Ministry and the other main stakeholders agreed upon a pilot period in which a number of polytechnics could experiment with a second degree programme in three relatively narrow fields, business administration, social work and health care, and engineering and traffic communications. The pilot started in 2002 and is currently subject of an external evaluation (see point 3.2). On the basis of this evaluation decisions will be made with respect to the name of the second degree title, the number of fields/areas in which the polytechnics can offer a second degree programme, the funding of the second degree programmes, etc. These polytechnic second degrees are aimed at students who have at least three years of work experience after earning their first degree. Between 40–60 Finnish credits are awarded.

In the Finnish credit system one credit stands for 40 hours of studies, implying that 1,600 hours of study (generally regarded as a full year of study) equals 40 credits. The maisteri degree is equal to 160 credits in most areas, and 180 credits in technology/engineering, medicine and law.

One specific characteristic of the Finnish system is the high level of autonomy of especially the universities in academic matters. This leads to some extent to a lack of clarity with respect to the formal length of degree programmes. Formally it is stipulated nowhere that 40 Finnish credits equal one year of university studies, nor is there a formal ‘conversion rate’ for translating Finnish credits into ECTS credits. In practice this, for example, has led to a situation in which the universities themselves decide on which conditions, i.e. on the basis of how much extra study hours, they will accept polytechnic Bachelor’s degree holders in their Master’s programmes. In addition, this has also caused some variation between universities when it comes to the current translation of Finnish credit points into ECTS points: some institutions indicate in their diploma supplement that 1 Finnish credit point equals 1.5 ECTS credit points, while others indicate that 1 Finnish credit point equals two ECTS credit points. While there are indications, amongst other things, coming from the Ministry of Education, that in the new national credit system based on ECTS to be introduced in 2005, 1 current Finnish credit will equal 1.5 ECTS credits, no formal decision in this has been made yet.

Currently maisteri degree programmes are identified with a number of study years, and equal a certain number of Finnish credit points. The 160 (Finnish) credits maisteri programmes are regarded to be a 5-year qualification, while the 180 credits maisteri programmes in technology are seen as equalling 5.5 years of study. In practice, however, the ‘ideal’ maisteri curricu-
lum has been constructed in such a way that a student can obtain 40 credits in a year which means that a 160 credits maisteri degree programme can be finished in four years, and a 180 credits one in 4.5 years, and many students actually manage to do so. On the other hand, the average study time for the 160 credits maisteri degree is more that six years and for the 180 credits degree in the field of technology close to seven years.

The ECTS system is currently used by Finnish stakeholders in international student mobility schemes. This has revealed the challenges of the current credit system in international competition, in the sense that outside Finland the 160-credit Master-level degree courses in universities are usually seen as equivalent to a course with 240 ECTS credits, implying that they are regarded as 4-year programmes, instead of as 5-year programmes.

As indicated, Finland is in a transition period. The Bologna goals will only be fully implemented in 2005. A number of issues concerning the new second degree structure depend on the outcomes of current policy debates, evaluations, committee work, and law proposals. As part of the transition the universities are in a process of adapting the structure of their degree programmes, and the expected outcome is that there will be more uniformity and transparency with respect to the length of Finnish university second degree programmes from 2005 on.

Denmark

Second degree structure

The second degree offered in Danish higher education is called a kandidat degree. Kandidat programmes are research based and may thus only be offered by institutions involved in research, i.e. the universities. The kandidat degree is in general a two-year, 120-ECTS degree, awarded on top of a three-year, 180-ECTS, Bachelor’s degree. It is a graduate programme that is equivalent to a Master’s course. The average study period to complete a kandidat degree, i.e. the full 300 ECTS credits study, is seven years.

Kandidat degrees are offered within all main areas, e.g. law, engineering, economics, pharmacy, medicine, theology, etc. In the humanities and natural sciences a kandidat degree often consists of two subjects, one major and one minor.

With the introduction of the ECTS credit system, the kandidat/Master degree represents 120 ECTS credits. Access is allowed on the basis of a Bachelor’s degree (180 ECTS credits).

In addition to the second degree programmes offered in the universities there are a number of further education programmes that have to be men-
tioned here. These programmes are part of the Danish further adult education structure (Videregående voksenuddannelse). This further adult education structure consists of three levels that are compatible with three levels in the regular education system, i.e. first the VVU (Videregående voksenuddannelse), at the same level as the short-cycle higher education programmes; second the so-called diploma programmes (diplomuddannelse), at the same level as the medium-cycle higher education programmes (Bachelor’s degree level); and third the Master’s degree programmes, at the same level as the university kandidatusuddannelse programmes. The one-year diploma programmes are in principle offered by CVU’s. Access is open to students with a short-cycle higher education diploma or a regular VVU diploma, as well as to students who in other ways fulfil the access requirements. In addition all students are required to have at least two years work experience after having finished the education programme that gave access to the diploma programmes. The Master’s programmes are also, in general, one-year programmes (in exceptional cases the programme can last up till 1.5 years). They can only be offered by the universities. Access is open to students who have a traditional or a new medium-cycle diploma/degree, a regular Bachelor’s degree or a further education diploma. Also here an additional condition is that students need to have at least two years work experience after having finished the educational programme that gave access to the Master’s programme.

Iceland

Second degree structure

Separate second degree programmes (Meistaraprof/Master’s) have already been introduced at the University of Iceland in 1923. While because of that there is a feeling that Iceland already had a ‘Bologna-like’ degree structure in its universities, still a number of adaptations is necessary because of the unique nature of the Icelandic higher education system.

The degree system in Iceland is generally based on a two-cycle system. Access to the second cycle, the Master’s level, requires a successful completion of the first cycle. There is, however, not one unitary system in place. In most fields the University of Iceland offers Master’s programmes with 90–120 ECTS credits, building on a 180–240 ECTS-credit Bachelor’s degree. Only in medicine, pharmacy, midwifery, psychology, and dentistry long integrated Master’s programmes (Candidatus/Kandidatsprof) of 300–360 ECTS credits are offered. In law and theology both separate Master’s programmes and long Candidatus programmes are offered, but this is replaced in Law by a 3+2 structure. Also at the other universities second degree courses are of-
ferred. The Iceland University of Education, for example, offers professional second degree programmes in Education leading to a Diploma in Education (30–60 ECTS credits) or an M.Ed. degree (120 ECTS credits).

The ECTS system is still not compulsory in Iceland, but exists parallel to the national system for student exchange purposes. 30 Icelandic credits correspond to one year of full time studies. Therefore, as a general rule 30 Icelandic credits correspond to 60 ECTS. A second cycle, or Master’s degree normally corresponds to 120 ECTS on top of a first cycle, Bachelor’s degree.

Iceland is the smallest of the Nordic countries with only just over 11,000 students. The national system does not have the capacity to offer Master’s degrees within all fields and disciplines, and the Government faces a challenge in evaluating within which fields they should have national Master’s degrees, and within which fields students should go abroad to gain their degree. About 24% of Icelandic students study abroad, many of them at the second degree level.

Norway

Second degree structure

Previously the Norwegian first degree was awarded on the basis of a four-year programme, candidata/candidatus magisterii, and the second degree programme was a programme of 1.5–2 years leading up to a cand.philol. (humanities), cand.scient. (natural sciences), cand.polit. (social sciences), or cand.san. (paramedical/health education) degree. The average time it took to complete a graduate degree exceeded 8.5 years, resulting in on average rather old graduates and high costs for society. This, together with international developments was one of the main arguments behind the reform of the degree structure.

With the reform from 2001 the former credit system where 20 Norwegian credits equalled one year of full-time studies was replaced by the ECTS system. Under the current system the average Master’s degree equals 1.5–2 years of full-time studies and stands for 90 or 120 ECTS credits. Some (professional) one-year Master’s programmes are allowed, but the preferred system is the 3+2+3 system. Most institutions implemented this structure in the academic year 2002/2003. All were required to do so as of the academic year 2003/2004. Some disciplines are exempt from this structure, such as medicine, theology, psychology and veterinary science. A Ph.D programme builds on a Master’s degree and has a duration of three years. There are individual application procedures between each of the three levels.
A Master’s degree should either be professional or discipline-based. The programme should include an individual piece of research leading to a Master’s thesis, of at least 30 ECTS, not exceeding 60 ECTS.

The Government encourages the development of English language Master’s degree programmes as part of the further internationalisation of higher education in Norway. This is intended to increase the number of international Master’s students studying in Norway and the international qualifications of Norwegian students in Norway.

Sweden

Second degree structure

The current degree system in Sweden was implemented as part of a higher education reform in 1993. Currently Swedish higher education can award 4 general degrees and more than 50 professional degrees. The latter are organised according on the basis of a somewhat different structure and are varying in duration. Of the general degrees, the magisterexamen consists of at least 4 years of full-time study, equalling 240 ECTS credit points. There are two alternatives with respect to this degree, one that builds on a three-year kandidatexamen (Bachelor’s degree), and one that is an individual four-year degree. Magisterexamen med ämnesdjup (Master’s degree with ‘depth’) is a four-year degree equal to 160 Swedish credit points of which 80 in a major subject. Students are required to have completed an independent thesis of at least 20 credit points or two theses of at least 10 credit points each. Magisterexamen med ämnesbredd (Master’s degree with ‘breadth’) builds on a higher education degree of at least 120 (Swedish) credit points. This is a slightly younger degree, introduced in 2001. It is a one-year degree awarding 40 credit points and requires an independent thesis of at least 10 credit points. The degree was developed to accommodate those who had left the higher education sector with a three-year higher education degree and who would like to continue their studies after a few years in the labour market. It was also developed to accommodate international students, or students with a degree from abroad.

The two postgraduate degrees awarded by Swedish universities are Doktorsexamina and Licentiatexamen. The higher education institution offering a postgraduate programme decides who is to be admitted. In order to be admitted an applying student must have at least 120 credit points from undergraduate programmes. In addition, he/she must fulfil the specific admission requirements laid down by the faculty board, the capacity to complete the programme successfully and have guaranteed financial support for the entire
period of study. The difference between a university and a university college in this is that in general only universities are entitled to award postgraduate degrees. However, university colleges entitled to conduct research in a particular discipline (vetenskapsområde) have the right to offer postgraduate programmes within their disciplinary area.

The Netherlands

Second degree structure

The current Bachelor's-Master's degree structure was introduced in 2002. It is a striking feature of this new Dutch higher education degree structure that for the Ministry not the length of the programme (as expressed in years and ECTS credits), but the final competency level of the graduates is the basis for the international comparability of the degree programmes. This has to do with the fact that the structure of the Dutch Bachelor's-Master's degree structure is not in all respects in line with the dominant interpretation of the Bologna Agreement in this, i.e. a 3 (Bachelor) + 2 (Master) + 3 (PhD) degree structure. The new university degree structure is 3 (Bachelor) + 1 or 2 (Master) + 4 (PhD), while the new professional higher education degree structure is 4 (Bachelor) + 1 (Master). The reason for this is that the new degree structure is to a large extent built on the degree structure it has replaced. In the previous structure universities were offering 4 or 5-year integrated first degree programmes that were awarding graduates with the Dutch equivalent of a Master’s degree, while the institutions for professional higher education (in Dutch: hogescholen) were offering 4-year first degree programmes that were regarded as being equivalent to a Bachelor’s degree.

An interesting aspect of the Dutch degree structure from the Finnish perspective is the position of the Master's (or postgraduate) degrees in the hogescholen sector. A distinction is made between initial and post-initial HBO (abbreviation of Hoger Beroepsonderwijs, the Dutch name for the sector of Higher Professional Education) Master's degrees. Initial Master programmes are funded by the Government and students are eligible for student support; post-initial programmes are not funded by the Government and the students are not eligible for student support. In principle only universities are allowed to offer initial Master's degree programmes, that is programmes that follow immediately after a Bachelor's degree programme, and therefore are meant for students who want to take a Master's degree programme immediately after their Bachelor programme and before they start to work. Only in a few areas, e.g. arts and teacher training, the universities are not able to offer these initial Master programmes, since they do not offer Bachelor programmes in
the areas in question. As a consequence in these areas hogescholen may offer initial Master programmes. The post-initial Master programmes are meant for students who have work experience after their graduation from a Bachelor (or master) programme. It is up to the institutions themselves to determine the required number of years of work experience. Given that the state does not fund these programmes students have to pay high tuition fees (between EUR 5,000 and EUR 1,5000 per year). This implies that in the Netherlands like in Finland the postgraduate (Master) programmes offered by the hogescholen are seen in the first place as a combination of adult education and lifelong learning. However, while in Finland these programmes fall under the funding and regulatory regime of the Government, in the Netherlands they are part of the market-oriented activities of the hogescholen.

Differences

The above descriptions reveal some of the differences with respect to the second degree (or postgraduate) structures. However, given that all European higher education systems are in a transition period as a consequence of especially international developments one has to be careful in drawing any conclusions with respect to what are the main differences. Denmark, Norway and the Netherlands have already come a long way in implementing the Bologna goals and introducing new degree structures; Finland and Sweden are still discussing some of the details of the new degree structures to be implemented in 2005 and 2007 respectively; and Iceland has a unique higher education system, being a small country, with about 25% of its students studying abroad and one institution dominating the system. This implies that hardly any firm lasting conclusions can be drawn with respect to the differences between the Finnish and the other included second degree structures, other than that these structures will become more similar in the coming years.

Taking this situation as a frame of reference, the following differences can be identified that apply to the situation at the moment.

1. Integration versus separation

This issue has to do with the way in which the second degree programmes are related to other parts of the higher education degree structure, especially the first degree structure. The options are:

a) The first and second degree structures are integrated, implying that in practice students enrol in a first degree programme and do not have to take an entrance examination or fulfil other formal requirements for entering the second degree programme, but can continue more or less au-
tomatically. This is currently the case in the Master programmes in the Finnish universities, in some of the magister programmes in Swedish institutions, and in the Icelandic Master programmes (Candidatus/Kandidatsprof) in medicine, pharmacy, midwifery, psychology, theology and dentistry.

In the Netherlands it is assumed that a Bachelor’s degree gives automatic access to at least one Master degree programme, in general a programme at the same university. However, Master programmes are expected to have an entrance examination for all other students than the ones coming from the connected Bachelor’s degree programme.

b) The first and second degree structures are separated, implying that in practice students have to take an entrance examination or fulfil other requirements before they can enter the second degree programme. This is the case in the regular Master programmes in the Danish universities, the second degree programmes in the Finnish polytechnics, the Norwegian Master programmes, the Icelandic Master programmes (with the exception of the integrated Candidatus/Kandidatsprof programmes mentioned above), and some of the Swedish magister programmes.

### 2. Selection

This issue is closely related to the previous one. It concerns the formal requirements to enter second degree programmes. While many second degree programmes have a limited number of places and have to select students on the basis of capacity and other requirements, the issue here is whether in addition to these entrance conditions, second degree programmes formally have to make a distinction in selecting students between university and non-university Bachelor’s degree holders.

a) In Finland the university Master programmes in practice only accept students with a university first/Bachelor’s degree directly. With respect to students with a Bachelor’s degree or equivalent from a non-university institution the university Master’s degree programmes all pose additional demands. At the moment the universities are totally autonomous in deciding upon the additional demands. A new Decree on university degrees is in preparation implying that in the future the universities to a large extent keep their autonomy in this, but are expected to demand at most 1 year of extra study (equalling 60 ECTS credit points) to non-university Bachelor’s degree holders. In the Finnish polytechnics the major requirements for students entering the second degree programmes is to have at least three years of work experience after the first degree.
Also in Iceland it is up to the universities themselves to decide upon the extra demands to pose on Bachelor’s degree holders from another Icelandic institution.

b) In Denmark in general a distinction is made between ‘professional’ and university Bachelor’s degree holders when it comes to the entrance of regular university kandidat programmes. Students holding a professional Bachelor’s degree will in general enter a one-year diploma programme. Professional Bachelor’s degree holders may enter a regular two-year university kandidat programme after an entrance examination.

c) In the other Nordic countries no distinction is made between Bachelor’s degrees from universities and from non-university institutions. Both give in principal access to second degree programmes without additional demands.

d) In the Netherlands university Master’s degrees grant automatic access to (in general) one connected Bachelor programme in the same university. Students coming from other university Bachelor programmes have to take an entrance exam. Students having an HBO Bachelor’s degree have to meet additional entrance demands, even though they have earned 60 ECTS credits more than university Bachelor’s degree holders. These additional demands are determined by the university itself, and in general consist of having to take additional courses, e.g. in a bridging programme. Unlike in Finland there are no separate Master programmes in universities only for HBO Bachelor’s degree holders. The latter enrol (in the end) in the same master programmes as the university Bachelor’s degree holders.

In the Dutch hogescholen the major requirements for students entering the second degree programmes is to have work experience after the first degree.

3. Bologna system versus national system

This issue relates to the extent to which the Bologna aims have been implemented in the involved countries. In this three groups can be identified:

a) Denmark and Norway have in practice implemented three main aims of the Bologna Agreement, i.e. in these two countries a Bachelor/Master degree structure (3+2) has been introduced replacing the traditional degree structure; both have formally introduced in 2001 the ECTS credit points system; and in both countries the Diploma supplement has been introduced.

b) The Netherlands has introduced a Bachelor/Master degree structure (in 2002); it has also formally introduced the ECTS credit system; but the
use of diploma supplements is only recommended and not mandatory.

c) Iceland has introduced long ago in certain fields a Bachelor/Master degree structure. Therefore the impression existed in Iceland that it had already fulfilled some of the main Bologna requirements. However, in some fields a long, integrated Master programme continue to exist, while in some fields this integrated programme is offered parallel to a 3+2 structure. In addition, the ECTS system is used next to the Icelandic credit point system.

d) Finland and Sweden are still in the process of deciding about the details concerning the implementation of the Bologna Agreement. Finland aims at having a new degree structure, and the use of the ECTS system introduced in the course of 2005, while Sweden aims at 2007. ‘Controversial’ issues are, e.g., in Finland the nature and name of the polytechnic second degree, and in Sweden, the length and nature of the new second degrees: one and/or two years, national and/or internationally oriented.

4. Academic/general versus professional orientation of second degrees.

This issue concerns the extent to which in addition to a research oriented, academic second degree structure, a country also allows, if not stimulates, the offering of professionally, i.e. work-oriented Master’s/second degrees.

a) In Denmark graduate degree programmes, including all two-year kandidat degree programmes, have to be research-based. In addition, as part of the adult education system, a one-year, work-oriented Master programme is offered at the universities. Students need to have at least two years of work experience after having finished the education that gives access to these Master’s degree programmes. This one-year programme does not give access to doctoral degree programmes. At the moment only the universities offer second degree programmes at the Master level.

b) In Finland the polytechnics have started to offer on an experimental basis second degree programmes that are work-oriented. Students need to have at least three years of work experience after their first degree, and the teaching programmes are organised around specific work-related projects. These programmes last 1 to 1.5 years (60–90 ECTS credits), and are organised in cooperation with working life. The first evaluations show that the students are on average over 35 and have extensive work experience. This implies that these programmes can to some extent be regarded as adult education/lifelong learning programmes leading to a second degree.

c) The Dutch situation can be compared to the Finnish situation. Also in the Netherlands the hogescholen offer work-oriented second degree
programme, lasting at least the equivalent of one year full-time study (60 ECTS credits). Since these programmes are not part of the initial, state-funded higher education system, they definitely have to be regarded as a form of lifelong learning for which the students are expected to pay cost covering tuition fees.

d) In Sweden the higher education institutions offer general (= academic) and professional degrees. Compared to the Finnish polytechnic degree programmes the professional degree programmes in Sweden provide entrance to a profession, and not lifelong learning. The same goes for the Danish one-year Master’s degrees.

e) In Norway and Iceland the emphasis is on the academic second degree, but these two countries also have professional second degrees, e.g. professional one year Master’s degree programmes at some the state university colleges in Norway, and an M.Ed. programme at the University of Education in Iceland.

5. The role of non-university system

This issue is closely related to the previous one. The question is whether non-university institutions are allowed to offer second degree programmes.

a) In Denmark only the universities are allowed to offer second degrees. Any research-affiliated education offered by the colleges has to be offered in cooperation with a university.

b) In Norway also the state university colleges are allowed to offer Master’s degrees.

c) In Sweden both universities and university colleges can offer magister programmes.

d) In Finland the second degree offered at the polytechnics is still in an experimental phase. Despite the fact that the first students have graduated, it is not clear yet what the formal name of their title is going to be. While the polytechnics promote the use of the name Master’s degree, the universities and some other stakeholders in Finnish higher education are against awarding this title to the polytechnic second degree.

e) In the Netherlands the hogescholen are allowed to offer a few initial, state funded Master’s degree programmes for ‘traditional’ students. In addition they are allowed to offer market oriented post-initial Master programmes for students with work experience.

f) Given the nature of the Icelandic higher education system it is not possible to make a straightforward distinction between university and non-university institutions. To give an indication of the scale of the second
degree structure in Icelandic higher education, in 2002 227 Master’s degrees were awarded, by far the most of them by the University of Iceland.

6. International dimension

This issue concerns the extent to which the national higher education policies address the nature of the international dimension in the higher education second degree programmes explicitly.

a) In Norway the Ministry of Education and Research stimulates and promotes the development of English language Master programmes, and the offering of English language modules. This is part of the ongoing Quality Reform of Norwegian higher education in which internationalisation is formally regarded as one of the main instruments for strengthening the quality of Norwegian higher education. Also in Denmark the Government stimulates the use of English as the language of instruction leading to a growing number of English one-year Master programmes and two-year kandidat programmes. In Denmark this development is not part of a major reform and seem to be somewhat more economically driven than in Norway (see also point d below).

b) In Finland the Ministry of Education introduced a goal of 30% of all regular Finnish degree students earning part of their credits abroad.

c) In Iceland international mobility will always remain an important part of the national higher education policy. The country is too small to offer second (and third) degree programmes in all fields. This implies that especially second (and third) degree Icelandic students study abroad.

d) In Denmark the decision of the involved Ministry to stop regular funding of the universities for non-EU students coming from countries with which Denmark has no special relationship has led in practice to the introduction of tuition fees for these students. What the effects of this decision are on the enrolment patterns of foreign students that have to pay tuition fees in Denmark in second degree courses in not clear yet.

e) While internationalisation has for long been an important part of the Dutch higher education policy, there is a tendency, like in Denmark, to consider intra-EU mobility and cooperation as part of the publicly funded activities of the universities and hogescholen, while non-EU students are proposed to have to pay the full costs of their education in the near future. The latter would imply that the universities will have to charge tuition fees of EUR 1,5000 annually or higher (in e.g. the case of medicine) to non-EU students.
Consequences, conclusions, recommendations

What are the main consequences of the developments in the second degree structures in higher education described above and what are the main differences between the countries included.

General consequences

- Because of the Bologna process second degree structures become more similar throughout Europe. This will take away a number of structural barriers with respect to student mobility. As a consequence, student mobility will not only become easier within specific regions, such as the Nordic region, but also between Nordic countries and the rest of Europe. Whether this will lead to an increase in student mobility in general within Europe remains to be seen.

- The growing similarity of European higher education degree structures can be expected to lead to a greater European-wide competition for especially ‘the best and the brightest’ among the regular second degree students. One of the developments already visible is that commercial organisations are trying to enter the ‘European Master’s degree market’ by acting as brokers for students who want to do their second degree studies in another European country. What the effects of this are going to be on the position of specific countries in Europe is not clear yet. However, the Nordic and Dutch governments and higher education institutions should be aware of the possibility that the their second degree programmes might lose the competition with other European Master programmes for the most talented Nordic (and non-Nordic) students if no specific measures are taken.

- There will be a growing pressure on the national higher education systems in Europe to adapt to the “Bologna goals”. The consequence might be that national governments have to ‘give up’ specific national structures, not only for meeting international expectations, but also because of internal pressures. For national higher education institutions it is very important to be part of European teaching and research networks. The more ‘national’ a specific degree structure is, the more difficult it will be to find European partners. Since European funding forms already a very important factor in influencing research practices and cooperation structures, and is becoming an important factor in affecting teaching practices too (for example, the Erasmus Mundus programme), national institutions will want to be acceptable and recognised in a European context.
Any national barrier to this recognition will most likely become an issue in the national higher education policy arena. In this sense one can raise the question whether, for example, the Swedish 4 year Master’s degree can survive? Another question is what the realistic alternatives are to ‘Master’s degree’ as the name for the title for the Finnish polytechnic second degree? In addition, once the Finnish polytechnics can award a Master’s degree, will the currently rather uniquely Finnish nature and structure of the second degree programmes survive, or will it be ‘harmonised’ in order to fit a developing, rather homogeneous European second degree structure?

**Consequences of differences discussed**

1. **Integration versus separation & selection**
   One of the consequences of access demands at the level of second degree programmes is that students who are not meeting the demands at specific institutions might look for study possibilities elsewhere, either within their own country, or elsewhere. For example, some Finnish first degree polytechnic graduates who have to earn extra credit points on top of their Bachelor’s degree before they are accepted in Finnish university Master programmes have started to enrol in foreign, e.g. Swedish, university Master programmes that do not pose additional demands. In addition, some Finnish first degree polytechnic graduates who have to have at least three years of work experience before being accepted by polytechnic second degree programmes prefer to enrol directly after graduation in a Finnish university Master programme even though this means that they have to study longer than the students who start with a university Bachelor’s degree.

2. **Bologna system versus national system**
   As discussed above, the consequence of emphasising the Bologna agenda in national reforms might be a marginalisation or even abolishment of specific national structures. On the other hand, the consequence of emphasising national demands and agendas is that some national programmes or institutions might be marginalised in European cooperation structures. The Finnish polytechnics are, for example, afraid that they will not be able to find European cooperation partners if they cannot offer Master’s degrees.
3. International dimension (including language)

The growing internationalisation of higher education in Europe has potentially important effects on the nature and quality of the national higher education structures. A potential outcome of the current Europeani-
sation at the second degree level (amongst other things, stimulated by the Erasmus Mundus programme) is that a European top level of high quality, English-language Master programmes will be developed attracting the most talented students and staff, top funding, and the interest of stakeholders, such as employers. These programmes will have ‘branches’ in all European countries, with the implication that the national language programmes run the danger of becoming ‘second rate’ programmes for the students who did not manage to get a place in the international, English-language programmes.
APPENDIX 2

Descriptors of Master’s level study from the UK Quality Assurance Agency for Higher Education

Master’s level

Much of the study undertaken at Master’s level will have been at, or informed by, the forefront of an academic or professional discipline. Students will have shown originality in the application of knowledge, and they will understand how the boundaries of knowledge are advanced through research. They will be able to deal with complex issues both systematically and creatively, and they will show originality in tackling and solving problems.

They will have the qualities needed for employment in circumstances requiring sound judgement, personal responsibility and initiative, in complex and unpredictable professional environments.

Master’s degrees are awarded after completion of taught courses, programmes of research, or a mixture of both. Longer, research-based programmes often lead to the degree of MPhil. Most Master courses last at least one year (if taken full-time), and are taken by persons with Honours degrees (or equivalent achievement). Some Master’s degrees in science and engineering are awarded after extended undergraduate programmes that last, typically, a year longer than Honours degree programmes. Also at this level are advanced short courses, often forming parts of Continuing Professional Development programmes, leading to Postgraduate Certificates and Postgraduate Diplomas.

Descriptor for a qualification at Master (M) level:

Master’s degree

Master’s degrees are awarded to students who have demonstrated:

- a systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their academic discipline, field of study, or area of professional practice;
- a comprehensive understanding of techniques applicable to their own research or advanced scholarship;
- originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline;
- conceptual understanding that enables the student:
  to evaluate critically current research and advanced scholarship in the discipline; and to evaluate methodologies and develop critiques of them and, where appropriate, to propose new hypotheses.

Typically, holders of the qualification will be able to:
- deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences;
- demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level;
- continue to advance their knowledge and understanding, and to develop new skills to a high level;
  and will have:

- the qualities and transferable skills necessary for employment requiring:
- the exercise of initiative and personal responsibility;
- decision-making in complex and unpredictable situations; and
- the independent learning ability required for continuing professional development.
Objectives of the postgraduate AMK degree experiment

The preparation work for the postgraduate AMK degree experiment started from the premise that postgraduate degrees building on the polytechnic degrees are needed in work life. The objective was to create a new adult education degree with a practical employment sector orientation, to be included in the context of higher education. It was found purposeful to create a new training channel for the increasing number of polytechnic graduates, professional people who need postgraduate training that differs from academic studies for the Master's degree. This degree would combine their further education needs and the development needs identified in the employment market and business.

Parliament adopted the Act on the postgraduate AMK degree experiment (645/2001) on 20 June 2001, and it entered in force as of the beginning of 2002. Under the Act on the experiment, the polytechnics could start the respective training no earlier than 1 August 2002. This temporary Act will be in force for three years, until 31 July 2005. In passing the Act, Parliament required that both the training programmes offered for the experiment and the implementation and results of the experiment be evaluated by FINHEEC.

As stated in Section 1 of the Act, the purpose of the experiment is to gain experience for the development of the postgraduate AMK degree. The grounds for the legislation further state that “the experiment will provide information and experience of the structure and scope of the AMK postgraduate degree system, on the practical employment sector needs and links, as well as on the status of these degrees in the overall degree system.” For this reason, the Act gives no indication as to the name of the postgraduate AMK degree or its position among the other degrees.

As stated in the law, the objective of the studies for the postgraduate degree is to be based on the AMK degree and the practical employment sector development requirements, thus providing the student with a sufficient theoretical and practical basis, as well as with the preparedness to cover demanding development and other tasks requiring special expertise.

The postgraduate AMK degree is employment sector oriented. The central element of the degree programme is a professional thesis. It is typically a development task focusing on a real-life work-related problem and develop-
ment challenge. The assignment is performed in collaboration with the practical employment sector, principally the student's own place of work. The objective is to develop the postgraduate AMK degree into a high-level professional postgraduate degree, with the student assuming a role of a life-long learner who utilises the past experience gained in work and who mostly studies for the degree whilst working and with a close connection to his or her own work. Thus, the postgraduate AMK degree is clearly different from the university studies for the Master's degree, and naturally also from scientific postgraduate studies.

The training programmes involved in the experiment were defined under strict political guidance. The grounds for the Government bill stated that the fields and training programmes admitted for the experiment should constitute a sufficiently versatile entity to allow for the evaluation of the experience and the outcome. On the basis of this experience, the final decisions would be made on the status of the postgraduate AMK degree and on the overall postgraduate degree policy. The law itself, or the grounds for the proposal, does not expressly quote any fields to be included in the experiment but the legislators insist that the experiment be launched in fields where the rapid development of work life and the development of internationalisation cause the most imminent need for further education and for upgrading the present competence of the personnel. According to the law, such fields would be business and administration, technology and health care.

With regard to the training programmes to be admitted in the experiment, the requirement was that the selection would highlight the role of the polytechnics in meeting the competence needs of small and medium-sized enterprises and welfare service providers and their personnel. The conditions for the development of these companies should also be enhanced. Parliament's Education committee approved the selection, but pointed out that the welfare sector was not included in the Government plans. The committee insisted that the social welfare sector be also included so that the health care and social welfare fields would constitute one professional task area. At the same time, the parliamentary committee pointed out that there is a parallel need for competence in these fields also concerning the joint operative field of health care including old-age welfare, mental health care and intoxicant and drug abuse work.

It was decided that the experiment would start in the three fields of training mentioned in the grounds for the legislation. The training programmes outlined by the Government were given quite precise and narrowly defined titles. However, the comprehensive social welfare sector programme was also included in the experiment at the insistence of Parliament.
The experimental training programmes were defined as follows:

*Business and administration (social sciences, business economics and administration)*
- training programme in entrepreneurship and business competence in the SME sector

*Social welfare and health care (social welfare, health and physical education)*
- training programme in the social welfare sector
- training programme in the promotion of health and preventive work
- training programme in the care of the ageing and the long-term patients

*Technology and transportation*
- training programme in welfare technology (in collaboration with the health care sector)
- training programme in refurbishment and complementary construction
- training programme in competence management (supplementary applications in 2002)

**Objectives of the evaluation**

The premises and objectives of the evaluation of the postgraduate degree experiment are based on the respective Act. The criteria defined for the experiment applications should also be taken into account in the evaluation of the experiment itself, where feasible. Moreover, the evaluation is oriented by the objective set by Parliament to utilise the material and best practices accumulated during the implementation of the experiment. The general objectives of the experiment include the gathering of information and experience on:
- the experimental model of the postgraduate AMK degree system, its structure and scope;
- the practical employment sector’s needs *vis-à-vis* the postgraduate AMK degrees;
- the links of the employment sector to the postgraduate training; and
- the status of the AMK degree in the overall system of university-level degrees.

On the basis of the experience accumulated and the evaluations made, it will be possible to reach conclusions about the status of the postgraduate AMK degrees, and more generally about the development of the university-level degree system. The purpose of the evaluation of the experiment and the information thus generated is to provide support for this decision-making process.

The way in which the evaluation will be implemented is dictated by the statement included in the grounds for the legislation, namely that the FINHEEC will compile an evaluation on the postgraduate degree experiment in
2003 and 2004. In its own report, the Education committee of Parliament underlined the importance of an evaluation made during the ongoing experiment, stating that “the outcome of the evaluation made during the experiment period must be utilised so that the best practices thus identified can be efficiently disseminated for the development of training and work life.”

General evaluation objectives

The objective of the postgraduate experiment evaluation is (a) to provide an empirically backed overall picture of the postgraduate AMK degree experiment and its implementation, and (b) to generate versatile and sufficient evaluation data on the achievement of the experiment objectives for the purposes of decision-making related to higher education policy.

Interim evaluation objectives

The specific objectives of the interim evaluation include the evaluation of the experiment premises and the launching stage, with focus on the demand for the training and its other employment sector dimensions, the quality assurance systems of the training programmes, as well as the organisation models related to the practical implementation of the training, along with the planned training processes. A further specific objective is to transmit and disseminate best practices.

Final evaluation objectives

The final evaluation will look into the experiment and the attainment of its objectives as a whole. Special emphasis will be on the achievement of the qualitative and university-policy objectives set for both the postgraduate AMK degrees and the experiment, on the significance and status of the postgraduate AMK degrees in the overall degree system, as well as on the higher education policy guiding the postgraduate experiment.
TIIVISTELMÄ

Julkaisija
Korkeakoulujen arviointineuvosto

Julkaisun nimi
Equal, but Different – An Evaluation of the Postgraduate Studies and Degrees in Polytechnics – Final Report

Tekijät
Pratt, J., Kekäle, T., Maassen, P., Papp, I., Perellon, J., Uitti, M.

Tiivistelmä

Loppuarvionin keskeinen tavoite on kokeilun kokonaisuuden kannalta laadullinen ja korkeakoulupoliittisten tavoitteiden toteutuminen. Lisäksi tavoitteiksi asetettiin jatkotutkinnon merkitys ja asema tutkintojärjestelmässä sekä jatkotutkintopolitiikkaa ohjannut korkeakoulupoliitikka.


Arviointiryhmä tuo raportissaan esille seurauksia keskeisiä tuloksia ja suositukia:

- tärkeää on molempien korkeakoulusektoreiden kehittäminen duaalimallin periaatteiden mukaisesti
- AMK-jatkotutkinnot on liitettyä osaksi pysyvää koulutusjärjestelmää. Tutkintominimikkeen tulee englanniksi olla Masters (maisteri), jota seuraa alakohtainen selvennys.
- kaikkien ammattikorkeakoulujen kaikilla koulutusaloilla tulisi voida järjestää jatkotutkintoja. Koulutuksen hyväksymisen tulisi tehdä seurauvien kriteereiden pohjalta. Kyseiset kriteerit tulisi myös lisätä lakiin:
  - työelämän tarve
  - koulutuksen alueellinen kattavuus
  - koulutusohjelmien laatu, rakenne ja sisältö
  - opiskelijamääräminen minimitaso, jollakin koulutusohjelmilla voivat olla rahoituksestiksi ja sisällöllisesti elinkelpoisia.

Avainsanat
Ammattikorkeakoulujen jatkotutkinto, työelämälähtöisyys, arviointi, korkeakoulupoliitikka, ohjaus ja rahoitus
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**Författarna**
Pratt, J., Kekäle, T., Maassen, P., Papp, I., Perellon, J., Uitti, M.

**Sammandrag**


Den slutliga utvärderingen gäller uppnåendet av de kvalitativa och högskolepolitiska målen med tanke på försöket som helhet. Ytterligare utvärderades påbyggnadsexamens betydelse och ställning i examenssystemet samt den högskolepolitik som styrt politiken kring påbyggnadsexamina.

Den internationella utvärderingsgruppen besökte Finland tre gånger under 2004. Utöver högskolebesöken och intervjuerna med intressegrupper som var centrala ur försöksynpunkt hade utvärderingsgruppen tillgång till riktligt med forsknings- och annat material kring försöket med påbyggnadsexamina.

Utvärderingsgruppen anför i sin rapport följande centrala resultat och rekommendationer:

- Det är viktigt att bägge högskolesektorerna utvecklas enligt dualmodellens principer.
- Påbyggnadsexamina bör kunna ordnas vid alla yrkeshögskolor och inom samtliga utbildningsområden. Godkännandet av utbildning bör ske utifrån följande kriterier, vilka även bör tas in i lag:
  - arbetslivets behov
  - utbildningens regionala täckning
  - utbildningsprogrammens kvalitet, strukturer och innehåll
  - miniminivå för utbildningsprogrammens livsduglighet med hänsyn till finansiering och innehåll.
- Finansieringen av påbyggnadsexamina bör omfattas av yrkeshögskolornas basfinansiering. Finansieringen bör basera sig både på antal nybörjarplatser och på antal utexaminerade (input/output funding). I framtiden kan finansieringen också basera sig på studieprestationer. Påbyggnadsexamina kan behöva extra finansiering i förhållande till yrkeshögskolornas grundexamina.

**Nyckelord**
Påbyggnadsexamen vid yrkeshögskola, arbetslivsinriktning, utvärdering, högskolepolitik, styrning och finansiering
SUMMARY

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Equal, but Different – An Evaluation of the Postgraduate Studies and Degrees in Polytechnics – Final Report

Authors
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Abstract
The polytechnic (AMK) postgraduate degree is a three-year experiment which started in late 2002, based on an ad hoc Act. An evaluation during the experiment process, performed by FINHEEC, is written into the Act. At the planning stage, it was decided that the evaluation would be performed in two parts – the evaluation of the starting phase (published in February 2004) as well as the final evaluation made by an international team.

The core objective of the final evaluation was to focus on the experiment as a whole, assessing whether its quality and higher education policy objectives have been reached. Other objectives were to clarify the significance of the postgraduate AMK degree and its status in the overall degree system, and to look at the higher education policy underpinning the postgraduate degree policy.

The international evaluation team made three visits to Finland in 2004. Besides the visits to the institutes of higher education and interviews with the major stakeholders of the experiment, the Evaluation Team had access to abundant research and other material on the postgraduate degree experiment.

In its report, the Evaluation team highlights the following results and recommendations:

- It is important to develop both sectors of higher education in accordance with principles of a dual system of higher education.
- The polytechnic postgraduate degrees must be made a permanent part of the training system. The academic title awarded to the graduates should be Master’s, followed by the field of specialisation.
- The polytechnic postgraduate degrees will be completed on a part-time basis by students already in employment. However, in the future it will be necessary to look into solutions which allow for the students to study full-time for their postgraduate degrees. This would also improve the postgraduate students' international mobility possibilities.
- All fields of specialisation of all polytechnics should be able to provide postgraduate degree teaching. The approval of degree programmes should be based on the following criteria which should also be recorded in the respective Act:
  - needs of working life;
  - regional coverage of training;
  - quality, structures and contents of the degree programmes;
  - minimum numbers which the programme needs for financial and academic viability.
- The funding of the postgraduate degrees should constitute a permanent part of the basic funding allocated to polytechnics. The funding of the postgraduate degrees should be based on the numbers of both entrants and graduates (input/output funding). In the future, the funding could also be based on the number of credits completed. The polytechnic postgraduate degrees may also need additional funding as compared to the basic AMK degrees.

Keywords
Postgraduate degrees in polytechnics (postgraduate AMK degrees), working life orientation, evaluation, higher education policy, steering and funding


Korkeakoulujen yleissuunnitelman seuranta. Tampere: Tammer-Paino Oy.

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