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Employability of professional bachelors from an international perspective

Final Report CHEPS

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Center for
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Preface

The NVAO is proud to present this CHEPS study on employability of professional bachelors from an international perspective. We think this study is not only most informative, but reading about good practices on how to link themselves to the world of work in input, process and results can also be a help for the study programmes, thus raising their specific quality that is so much needed in this globalized society.

Already in 2012 the Executive Board of NVAO thought of a system-wide analysis on the quality of professional bachelor study programmes. Within the Bologna process a common qualifications framework of the European Higher Education Area had been adopted in 2005. Since then the three main cycles and a shorter cycle of higher education have been structured in most European countries. Yet the continuum of fundamental academic research programmes to programmes strictly oriented towards professions could only be described through their learning outcomes. In quite some countries these different orientations have been structured in binary systems of higher education. Since the ultimate quality of study programmes is to be found in the learning outcomes, which should enable the graduates to function in this world, the NVAO thought it was worth investigating how the quality of professionally-oriented programmes relates to their links with the world of professions and could be measured in the employability of the graduates, among other things. In the current move from study programme accreditation to institutional accreditation in Denmark for example, relevance is one of the five explicit and still debated criteria. At the same time in quite some countries a national qualifications framework of generic descriptors was being developed and linked to the European Qualifications Framework of Lifelong Learning (EQF).

It was soon clear that such a study would be most useful if it did not only deal with the Netherlands and Flanders, but would also be international. Methodologies of linking education to the world of work and professions as well as quality assurance do certainly not stop at national borders anymore. The rising international mobility of students and staff as well as the development of the international dimension within study programmes proves the pertinence of this reality. Although the majority of external quality assurance frameworks is still national and accreditation is still a national/regional competence in most countries, the Bologna process has opened and is opening the area as a response to the globalization of societies and economies.

Thanks to the combined expertise of CHEPS and NVAO we could quickly come to defining a rationale, and formulate appropriate research questions for the study and its specific methodology. We soon realized that the study would be most useful if it dealt not only with the results in terms of employability in a narrow sense, but also looked upon how input, process and assessment were and could be linked with the world of work. Together we could quickly select the comparative study programmes from different domains of study as well as of interesting countries. Our fellow accreditation organizations were easily identified and they all welcomed to be interviewed in this research, which they also considered to be important in their own countries and practices.

The study has turned out to be most informative for the professionals working in and with the study programmes: educational managers, directors, (internal) quality administrators and last but not least lecturers and even responsible students. The description of how the four national systems deal with learning outcomes and link them to the needs of the professional world is most revealing. The fact that the study also formulates good practices and recommendations makes it even more worth reading. The dimension of employability clearly has several aspects, directly but certainly also indirectly. There are definitely many ways in which the world of work is and can be linked to the intended learning outcomes, as well as to the learning and evaluating processes and quality assurance itself. While this research is fundamentally qualitative, it makes clear that there are many roads to qualitative final qualifications in which the match between education and employment is as close as possible. NVAO hopes and will cooperate in distributing this most interesting study widely and internationally.

Finally I would like to thank the Executive Board of NVAO for its investment and trust in this research, the internal advisory committee, existing of the vice-chair, Mrs. Demeulemeester, the policy advisors, dr. Mark Frederiks and Mr. Tim Lamers, and the undersigned. Last but not least we have met hard-working, insightful and open researcher in the person of Mr. Renze Kolster and his supervisor, dr. Don Westerheijden.

Lucien Bollaert
Member of the executive board NVAO

Acknowledge-ments

The researchers wish to thank the interviewees from all study programmes, field organisations and quality assessment agencies very much for their kind cooperation and willingness to share their experiences and opinions. Thanks also go to Ann Demeulemeester, Mark Frederiks, Tim Lamers and especially Lucien Bollaert at the NVAO for their critical yet constructive and moreover friendly supervision of this study.

Renze Kolster & Don F. Westerheijden

Executive Summary

Employability of its graduates is perhaps the ultimate test of any professionally-oriented bachelor programme. How do study programmes that are performing well in terms of employability connect to the professional field? Their good practices may inform the development of employability-related practices in study programmes and in may inform quality assurance systems in developing effective criteria and procedures.

For this reason, the Accreditation Organisation of the Netherlands and Flanders, NVAO, commissioned the Center of Higher Education Policy Studies (CHEPS) to make an explorative, international comparative study, to gain insight into realisation, organisation and securing the connection between professional orientated bachelor programmes and the labour market.

Four higher education systems were selected: the Netherlands, Flanders, North Rhine-Westphalia (Germany), and Ireland. The study focuses on three distinct knowledge domains: mechanical engineering, social work, and tourism. Information on the practices in study programmes to keep in touch with employability needs was gathered through desk research and through interviews with quality assurance organisations, professional field bodies and study programmes. Two study programmes were selected for each domain in each country. Selection of the study programmes was based on their known and if possible proven incorporation of employability. Consequently, we selected study programmes for which we had indications that they improved the employability of students more than average.

Information on how connection to the professional field was maintained was sought in four phases of study programmes, namely:

- Phase 1, Input: input from the professional field for the design of the study programme.
- Phase 2, Process: link to the professional field in education and examination.
- Phase 3, Results: outcomes of the input and process phase in terms of employability.
- Phase 4, Process management and evaluation: link to professional field in (internal and external) quality assurance.

With respect to the input phase we concluded that the study programmes take the professional field to a large extent into account. Study programmes included employability into study programme design through a number of methods that related to:

- Internal consultations: teachers with professional experience, professional field advisory boards, and making links to the institution's profile.
- External consultations: particularly with employers in the region, professional field representative bodies on the national level and international consultative bodies.
- System level standards and policies: domain-specific learning outcomes, national qualification frameworks and innovation policies are applied where they exist.

The input methods were strongly related to the country's established quality assurance requirements. Thus, all Dutch study programmes were involved in the establishment of domain-specific learning outcomes, which they translated – in some cases with additional input from the (local) professional field and/or their professional field advisory board – into their study programmes. Two of the three study domains in Flanders also had established domain-specific learning outcomes, though not directly together with the professional field. Perhaps this was one of the reasons why the Flemish study programmes developed rather extensive consultation processes to gain input from their (local) professional field or through their professional field advisory board. The interviewed German study programmes had a high degree of autonomy, which reflected in their opportunity to make their programme either more academically-oriented or more professionally-oriented. Programmes choosing the latter were often in contact with local employers. Exceptions were the two German tourism programmes, which were located at private higher education institutions. They had developed far more formal linkages to the local, national and international professional field. The approach of Irish study programmes to a large extent depended on whether the professional field granted professional titles or required registration. If there was controlled access to the profession, the field or governmental authority could establish domain-specific learning outcomes, which study programmes needed to translate into their curricula if they wished their graduates to be eligible for the professional title or registration. In all cases, input for the study programmes was collected by formal or informal consultation with (local) employers. Whether a formal or informal approach for contacts with the professional field was chosen largely depended on the size of the study programmes and institutions. It could also be a strategic decision, as some

study programmes argued that formalisation of contacts might negatively affect the willingness of employers to participate.

The process phase is about how the study programmes arranged links with the professional field in education and examination. Common methods in this phase included: internships, projects or project-based learning, teachers with professional experience, guest lectures, field trips, and elective modules. The professional field was also involved in examination of the projects, internships, graduations, role-play assessments, and sometimes in juries even without there being a direct link with the profession representative in the jury, for example to assess graduate theses.

Through strong linkages with the professional field, many study programmes made continual curriculum adaptations to include the latest trends and developments of their sector. Flexible adaptation to the latest trends appeared to be especially relevant for study programmes in dynamic sectors, in particular tourism. Across all domains studied, study programmes taught employability-relevant transferable skills next to field-specific skills. Transferable soft skills included: communication, job attainment training (e.g. interview skills, networking skills, professionalization of online presence), and language skills (particularly taught by tourism programmes). Some institutions operated dedicated centres, outside study programmes, to facilitate students' acquiring job-related skills. Internationalisation could aid employability of the students, however many study programmes mentioned that that they could give more attention to internationalisation. Initiatives specifically established to enhance the employability of incoming, degree-seeking international students appeared to be largely absent.

Regarding the results phase, in general the study programmes and stakeholders appeared satisfied with the achieved employment of the graduates. However, the results were strongly related to the economic situations of the particular domain and country or region. Other factors that affected the employment results included urban location of the institutions, governmental policies, graduates finding employment outside the field for which they were educated, graduates continuing their education, and fragmentation of the labour market. Study programmes deployed different monitoring strategies to get insight into the employment results of their graduates and into the satisfaction and future needs of employers. Some programmes or the institutions to which they belonged surveyed alumni and employers regularly, while others did not do this systematically or used more qualitative methods (e.g. monitoring LinkedIn profiles). Alternatively, alumni surveys could be organised nationally, as in the Netherlands (HBO-monitor). Particularly tourism programmes needed to be aware of the quantitative (demands on labour market) and qualitative (need for specialisation) developments. Such information was used to inform important strategic decisions of study programmes, e.g. to move towards broader or rather towards more specialised programmes. Both strategies were used. Overall, we saw a virtuous circle in which increased contact between programme and professional field led to higher mutual satisfaction.

In the final phase that we distinguished, we found that internal quality assurance practices related to employability differed per institution. Particularly the larger institutions had formal procedures to get input from the professional field, to involve the professional field in education and examination and to collect employability statistics. A good practice was to have PDCA-cycles defined for the different phases which included contacts with the field explicitly. We saw that the quality assurance practices of smaller institutions were more informal: e.g. meetings with the employers were organised ad hoc and (qualitative) employability information was gathered through face-to-face contact with alumni.

The study programmes were largely satisfied with the amount of attention given to employability in external quality assurance, although the practices and intensity of the employability focus differed across countries. Most study programmes found a stronger focus on employability in external quality assurance unnecessary. Alternatively, programmes – especially those in tourism – indicated that external quality assurance should focus more on the achieved academic level and on what the programmes had done to create linkages to the professional field.

The different strategies and approaches to enhance employability of students largely related to the country-specific context, the domain-specific context and institutional characteristics. Country-related aspects included, for example, whether input for the curriculum design was structured through nationally-defined domain-specific learning outcomes, and whether it was obligatory for the programme to collect employability statistics. In the domain-specific context relevant factors included: diversity and dynamics of the sector, employment perspectives in the sector, cooperation among study programmes in the same domain, and the degree of accountability programmes felt for the employability of their graduates. Approaches to employability were also influenced by institutional characteristics, in particular

the size of the institution and the programme in number of students, which influenced the degree of formalisation of contacts with the professional field. Likewise important was the balance between local, national and international orientation of the institution and programme. Moreover, the institution's profile influenced the focus on particular competences and learning outcomes, e.g. foci on sustainability or entrepreneurship.

The strategic approaches that study programmes took to be relevant to society, to the professional field and to students also appeared to be influenced by aspects related to the country, domain and institution. The main strategic approaches were:

1. Broadening: e.g. inclusion of more general and transferable competences in terms of knowledge, skills and attitudes.
2. Specialising: e.g. offering elective specialisation modules.
3. Academic orientation: e.g. inclusion of more academic competences.
4. Professional orientation: e.g. inclusion of more vocational competences.
5. Geographical (regional, national or international) orientation: e.g. if regional employment perspectives were poor, attention in the input and process phases could shift to national or international employability.

Related to changes in contexts, a study programme's strategic approach was likely to shift over time. Although we did not have the opportunity to observe changes over time, our impression was that employability-enhancing aspects were becoming better embedded in the study programmes. Clear examples involved increased involvement of the professional field in examinations and increased attention for employability in internal and external quality assurance.

Our research suggested that study programmes and policy makers on system level were facing important challenges with respect to employability. First, while national definition of domain-specific learning outcomes ensured attention to employability, some interviewees voiced fear that programmes might become too uniform, leaving too little room for differentiation and profiling. Second, the employability mechanisms in the input phase were mostly tailored to the regional or domestic labour market (e.g. consultation of national professional field representative bodies). If the international labour markets would gain importance, the current input mechanisms might no longer be fit for purpose. Third, study programmes had to take into account an increasing number of stakeholders on a variety of levels. These stakeholders had different and sometimes conflicting demands, amongst which study programmes were to find the right balance (i.e. not everything can be included in a 180 or 240 ECTS programme). However, getting the balance wrong might have serious implications for the employability of students and for the reputation of the study programme and its institution. Finally, uncertainty due to sectorial employment dynamics triggered study programmes to utilize different strategic approaches to curriculum development with an eye to employment.

Our study did not look into which strategic approach was best; answering that question would require more research, and would probably conclude that there are contingencies (i.e. there is not one best way in all circumstances). Similarly, the higher education systems and the study programmes within them that we studied varied with regard to their intensity of attention to employability aspects. It is not in the scope of this project to emphasise a particular model as best. Rather, good practices were highlighted where we encountered them. By doing so, we hope to contribute to study programmes' ambitions to enhance employability, and to what stakeholders can expect from professional bachelor programmes. In this way, our study aimed to contribute to emphasising employability aspects in internal and external quality assurance.

Chapter 1

Introduction

1.1 / Introduction to the study

The employability of professional bachelors' study programmes is a topic of interest throughout Europe, especially to countries that have part of their higher education system dedicated to professional education (binary higher education systems). For this reason, The Accreditation Organisation of the Netherlands and Flanders (NVAO) commissioned CHEPS (the Center for Higher Education Policy Studies, University of Twente) to undertake an exploratory study to find leads and to gain knowledge of good practices with respect to ways of assuring the employability of professional bachelors' study programmes. Hence, the goal of this exploratory and international comparative study is to gain insight into the connection to the labour market of professional bachelors' study programmes in different countries, with a focus on the realisation, organisation and security of this connection.

This chapter will continue with a discussion on the key concepts and the literature linked to employability, after which the research questions, research design, research methods and the limitations of this study are introduced. To clarify the goals and focus points of our study, links between the key concepts and this study will be emphasised in text boxes.

1.2 / Key concepts & literature review

1.2.1 / Key concepts

Professional bachelors are defined as first cycle study programmes, on EQF-level 6, that educate students to independently perform a profession (NQF-VL: 'independent practice of a profession or a cluster of professions', NQF-NL: 'the level of starter professional practitioner'), irrespective of the length (in ECTS or study years) and education type (full-time, part-time, etc.). In the Netherlands and in Flanders, law dictates that the learning outcomes of professional bachelors' studies must have a close link to the professional field (Netherlands: WHW art. 1.1, d; Flanders: Structuurdecreet 2003, art. 12 § 2 & art. 58). Professional bachelors are different from vocational programmes (EQF-levels 3 and 4) because of their broader orientation and incorporation of advanced knowledge and critical understanding of theories and principles.

The interaction between study programme and the professional fields is an important quality indicator, which receives attention in the accreditation process. The extent to which this interaction receives attention in the accreditation process as well as which mechanisms and methods are used, will be researched in this project.

Employability describes the degree to which people are trained and educated to utilize their capacities, with which they can attain and secure employment. Employability also is a reflection of the context or environment and the employers, and of the work environment they created (i.e. the extent to which personal development and learning are stimulated and facilitated). However, most factors with respect to employability relate to the individual. Individual factors associated with employability are competences, attitudes and availability (Van der Heijden, 2005). This individual perspective can also be found in the employability definition by Yorke (2006 p. 8): employability is 'a set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy'.

This research project is not about defining and testing the term 'employability', it rather aims to learn how the fields understand the concept and how they employ the concept in professionally-oriented higher education.

Qualifications are: 'Any degree, diploma or other certificate issued by a competent authority attesting the successful completion of a recognised programme of study' (European Area of Recognition Manual, 2012 p. 82). Hence, qualifications prove a person's attained competences.

Competences are: 'A dynamic combination of cognitive and metacognitive skills, knowledge and understanding, interpersonal, intellectual and practical skills, ethical values and attitudes. Fostering competences is the object of all educational programmes. Competences are developed in all course units and assessed at different stages of a programme. Some competences are subject-area related (specific to a field of study), others are generic (common to any degree course)' (European Area of Recognition Manual, 2012 p. 82).

Intended **Learning outcomes** 'describe what a learner is expected to know, understand and be able to do after successful completion of a process of learning' (European Communities, 2009 p. 13). Moreover, 'learning outcomes are verifiable statements of what learners who have obtained a particular qualification, or completed a programme or its components, are expected to know, understand and be able to do. As such they emphasise the link between teaching, learning and assessment' (ibid.). Learning outcomes may be formulated by internal and external stakeholders (e.g. study programme representatives and professional field advisory boards). The required learning outcomes including the competences for a profession can be expressed in an 'employability skills framework' (Precision Consultancy, 2007).

The use of learning outcomes in the discussion about study programmes in higher education has gained importance especially in the European Higher Education Area, as a consequence of the Bologna Process, in which the formulation of a joint qualifications framework based on abstract learning outcomes characterising the different cycles in higher education was a major achievement needed to achieve compatible understandings of bachelor and master levels, especially, across the 47 participating countries (Westerheijden et al., 2010). The definition of learning outcomes in the Bologna Process derived mostly from the 'Dublin Descriptors' (Westerheijden & Leegwater, 2003) and in more detail from the domain-specific sets of learning outcomes defined by teams of peers in many domains of higher education as part of the Tuning projects (Gonzáles & Wagenaar, 2003)

Concerning learning outcomes, the focus of this research is on the expectations professional fields have with respect to the learning outcomes of graduates of certain study programmes. We assume that the required domain-specific learning outcomes are known and documented and that this is the result of a consensus reached between the higher education institution and the professional fields. If this is the case, the learning outcomes attained through the study programmes reflect local, national or even international labour market requirements. This research examines the extent to which – and how – these requirements are reflected in the curricula or study programmes. It also will be interesting to see contextual differences: higher education institutions may, for example, include regional and institution-specific learning outcomes.

In this report several other phenomena are described by a common term as much as possible. More specifically, this report uses the following terms:

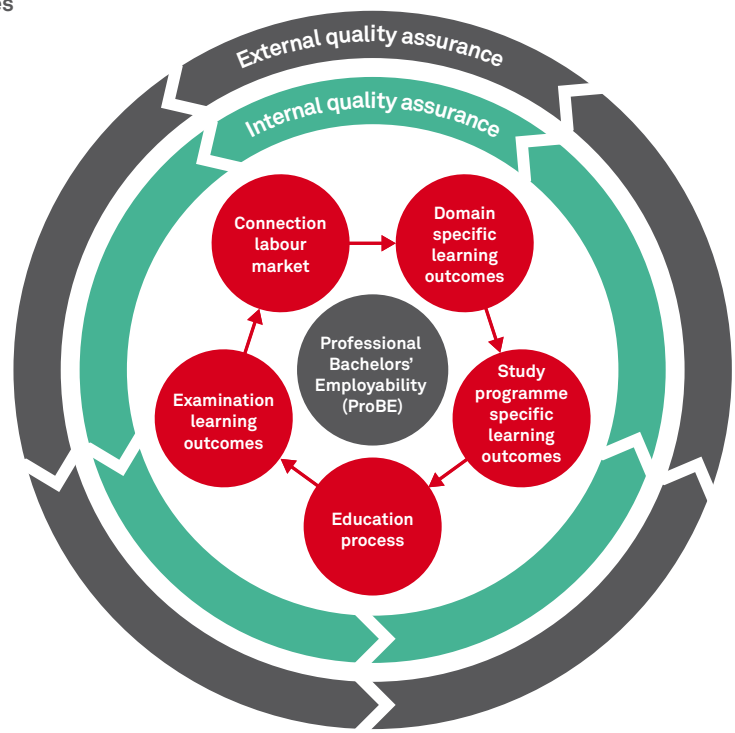
- 'Teachers', also where 'academic' could have been more appropriate (e.g. in German context).
- 'Internships', also for work-placement periods.
- 'Professional field advisory boards', also if the study programmes use different terms (e.g. industry representative board, professional field advisory committee /commission, etc.).
- 'Modules' to describe course content.
- 'Course' to describe the whole study programme.
- 'Universities of applied sciences', also when named differently (e.g. university colleges).

1.2.2 / Employability in research literature

Employability has been discussed in academic literature since five decades (Yorke, 2006), and continues to become more relevant by the year (Glass, 2013). Explicit in these discussions is the role of higher education, employers and the students themselves. Since the 1980s, employability issues have become increasingly connected to higher education. The development coincides with increased pressure on higher education to meet the needs of the economy (Harvey, 2000). As the needs of the economy are dynamic, the employability discussion remained and in most cases also increasingly became connected to quality assurance processes. Consequently, more quantitative data was needed and became available through, for example, graduate surveys, which *inter alia* aimed to measure the employability of graduates as well as their satisfaction with how their studies prepared them for the labour market. A key example of such graduate studies was the Research into Employment and Professional Flexibility (REFLEX) study, which surveyed 70,000 higher education graduates from 16 countries (Allen & Van der Velden, 2009).

Results from the REFLEX study indicated that graduates from vocationally-orientated higher education studies are prepared for working life effectively in terms of chances of being employed and utilizing their knowledge and skills. Nevertheless, many graduates from vocationally-oriented programmes reported a mismatch between the content of their training and work. This could also be the result of the employers' increased efforts to recruit graduates with the right skills and knowledge, rather than recruiting graduates from specific study programmes (Harvey, 2000). The REFLEX study also found that functional flexibility, international experience, and study-related work experience during higher education, were

Figure 1.1: Learning outcomes in the education and quality assurance processes



positively associated with the employability of graduates. Of importance to the employability are also factors such as: mode of study (full-time or part-time), the student's location and mobility, graduates' previous work experience, age, gender, ethnicity and social class (Harvey, 2001, p. 103)

More specifically, a study by Gallup Organization (2010, p. 12) found that employers thought the following skills to be important:

- Team working skills (very important: 67%).
- Sector-specific skills (very important: 62%).
- Communication skills (very important: 60%).
- Computer skills (very important: 60%).
- Ability to adapt to and act in new situations (very important: 60%).
- Good reading/writing skills (very important: 59%).
- Analytical and problem-solving skills (very important: 58%).
- Planning and organisational skills (very important: 53%).
- Decision-making skills (very important: 46%).
- Good with numbers (very important: 40%).
- Foreign language skills (very important: 33%).

Bachelor degrees are by default, and in line with the Bologna Declaration, relevant for the labour market. Therefore, it can be expected that especially in professional bachelor degrees the learning outcomes employers demand are reflected in the curriculum. Successful inclusion of the work-relevant competences, i.e. knowledge, skills, experience and attitudes, in the study programmes presumably leads to high graduate employability. International comparative literature on how the employability aspects are facilitated in professional bachelor programmes is largely absent. This study aims to redress this lapse.

1.3 / Research questions

The connection to the labour market should ideally be included in every phase of the study programme, especially in professionally-orientated study programmes. This ideal model, as is visualised in Figure 1.1, provides the basis on which we can research the employability of professional bachelors' study programmes. The following four phases can be deducted from Figure 1.1:

- Phase 1, Input: ideally, domain-specific learning outcomes are used as the basis on which higher education institutions design their curricula.
- Phase 2, Process: knowledge of and contact with professional fields are part of the education process and the degree to which examinations / projects are designed to reflect competences (knowledge, skills, experience and attitudes) needed for successful employment.
- Phase 3, Results: if an education programme has both the input and process aspects developed as described above, then the employability of its graduates should be high.
- Phase 4, Process management and evaluation: in quality assurance (internal and external) attention is to be paid to the extent to which the envisioned programme requirements are attained and if the requirements are (still) in line with the needs of the labour market (input phase).

Described above is the role of employability in the four phases in an ideal situation. The extent to which reality matches the ideal situation is the foundation of the research questions posed for this research. The goal of the research is to find best practises in all four phases. The four research questions are as follows:

1. **Input: how is the translation of domain-specific learning outcomes per study programme organised?**
   a. To which degree and how do the envisioned study programme-specific learning outcomes reflect the domain-specific learning outcomes?
      - Do study programmes take the professional field into account?
      - Do the study programmes adjust the domain-specific learning outcomes to the institution's profile and local context?
   b. With which methods and mechanisms are the intended learning outcomes of professional bachelors' study programmes attuned to the professional field?
      - Examples of possible methods/mechanisms are use of professional field advisory boards and use of national qualifications frameworks.

2. **Process: how is the link between study programme and professional field arranged in education and examination?**
      - Examples are teachers with professional and practical experience, internships/work placements and external examiners from the professional field.
      - Are there initiatives to enhance the employability of international students in the local labour market?

3. **Results: what are the results of the 'input' and 'process' in terms of employability?**
   a. What is the quantitative and qualitative connection of graduates to the labour market?
      - Expressed in terms of, e.g., employment statistics of the included professions and needed search time between graduation and employment.
   b. How do the stakeholders (employers and professional field representative bodies) judge the connection between the labour market and the professional bachelors' study programme?
      - An important indication of the judgement of the stakeholders can be found in satisfaction studies covering the realised learning outcomes of graduates. It is important to take into account the consequences of the economic crisis in terms of the oversupply in certain professional fields/domains and countries.

4. **Process management and evaluation: what is the role of employability in the quality assurance?**
   a. Internal quality assurance: do the self-evaluation reports of the study programmes or institutions include employability factors?
      - To make this evaluation possible, sufficient data on the employability need to be included in the self-evaluation reports.
      - This research question is about how the internal quality assurance evaluates the employability aspects, rather than how the study programme/institutions scores in terms of employability.
   b. External quality assurance: do the external quality assurance reports of the study programmes or institutions include employability factors?

1.4 / Research design and methods

To answer the research questions, the research design included three representative and important professional sectors, namely:

- Mechanical engineering.
- Social work.
- Tourism.

These sectors cover a range of hard and soft study areas, which gives our case studies the needed diversity. Importantly, these study programmes enrol large numbers of students in most countries with a separate professionally-oriented higher education sector.

At the same time, there is an *a prima vista* spread of the study areas on the context factors of the labour market structure. In particular, two factors may play a vital role in the domain-specific characteristics, and could influence the methods and mechanisms higher education institutions and study programmes use to tie their programmes to the labour market. These two factors are:

- Ownership of sector: mostly public-oriented study programmes (social work) and mostly private-orientated study programmes (tourism).
- Size of companies: mostly large (mechanical engineering) and mostly small/medium (tourism).

To avoid idiosyncratic research results, this research included empirical data of two study programmes in each area in each higher education system. To find good practices, this study looked into four higher education systems, namely:

- Flanders.
- The Netherlands.
- North Rhine-Westphalia (Germany).
- Ireland.

These four higher education systems all have an extensive and long-established professional bachelor's education sector. At the same time, these systems hold enough variation to make a comparison interesting (McQuade & Maguire, 2005; Schomburg & Teichler, 2011; de Weert, 2011). Given the comparatively large scale of Germany's higher education system, and because higher education is mainly within the authority of the 'Länder', the research focus is on one 'Land'. We opted for North Rhine-Westphalia because this is the largest 'Land' and is bordering the Netherlands and Belgium. In sum, this study included two study programmes per area of each higher education system, which comes to (4x2x3) 24 case studies.

The 24 cases were selected on their *a priori* expected incorporation of employability in their study programme. To select promising cases we consulted studies and rankings on employability outcomes of studies, and visitation reports. To limit the number of selection possibilities, we focused on full-time, publicly funded institutions/study programmes.[1] We have to observe that in Flanders mechanical engineering is exclusively provided by universities, not by universities of applied sciences. Therefore, professional bachelors study programmes in the related field of electro mechanics were chosen. Similarly, for Ireland professional bachelors' study programmes in the field of social care were chosen, because social work degrees are exclusively granted by Irish universities.

This explorative research used a combination of research methods for each research question, namely desk research and interviews. Desk research was used to collect information on:

a. Academic literature and research reports on employability in general and more specifically on professional higher education.
b. Self-evaluation and external-evaluation reports.
c. Publications on domain-specific and study programme specific learning outcomes.
d. Satisfaction studies about employability of graduates held among alumni and employers (e.g. the HBO-monitor).
e. Quantitative and qualitative statistics related to the connection between graduates of professional study programmes and the labour market.

In addition to the desk research, interviews were held with experts in quality assurance agencies (in the four higher education systems), experts from consultative structures on domain-level, and experts (e.g. programme coordinators and programme directors) within our 24 study programmes and higher education institutions. The interviewed organisations are listed in Appendix III.

The 35 (4+7+24) semi-structured interviews were conducted as face-to-face interviews and through telephone. The guidelines for the semi-structured interviews with the experts can be found in Appendix II. During the interviews, identifying (good) practices of the study programmes and higher education institutions in terms of employability aspects in the four phases was a focus point.

1.5 / Limitations

The explorative nature of this study and the related limited number of case studies allow for recognition of good practises, but does not allow for generalisations with respect to the overall employability of professional bachelors' graduates in all domains or in all European countries. Hence, and considering the goals of the study, the focus will be on the recognition of how study programmes include issues of employability of their graduates in the learning experience in general, and more specifically on recognising good practices that other study programmes or quality assessment agencies might take into account.

1.6 / Chapter overview

After an overview in chapter 2, placing professional bachelor studies in the context of the respective higher education systems in the four jurisdictions of the Netherlands, Flanders, Ireland and North Rhine-Westphalia, the chapters in this report will follow the analytical four phases of the education development process; from determining the learning outcomes, to their implementation and evaluation. The phases relate to the four research questions. Consequently, the empirical outcomes for each research question are discussed in respectively Chapter 3 (input), 4 (process), 5 (results) and 6 (process management and evaluation). In Chapter 7, conclusions on how professional bachelors are prepared for professional life are provided. In the final chapter of this report, the observed good practices in the previous chapters are translated into recommendations for stakeholders.

1 Exceptions are courses related to tourism in North Rhine-Westphalia (Germany) because these are almost exclusively provided by private (state-recognised) higher education institutions.

Chapter2

Professional bachelors in four higher education systems

System contexts are important to understand the way in which employability is embedded in higher education systems in general, and more specifically in professional bachelor programmes. National[2] contexts and in particular the quality assurance systems can strongly influence the ways in which study programmes are to receive input from and align the learning outcomes to the needs of the professional field. Therefore, in this chapter we include descriptions of the higher education systems, the guiding principles for the input, process and results phases, and how employability is evaluated in external quality assurance. Information for the descriptions has been collected through desk research and through interviews with quality assurance organisations.

2.1 / Flanders

2.1.1 / The higher education system

The responsibility for education in Flanders is vested in the hands of the Flemish government (Dassen & Luijten-Lub, 2007). The higher education system consists of universities and non-university higher education. The latter institutions are called university colleges (in Dutch: Hogescholen) and offer both first and second cycle degrees. There are 20 university colleges and 6 universities. In 2012, 99,545 students enrolled in profession-oriented higher education and 111,066 in academic-oriented higher education. In the profession-oriented higher education the most popular fields of study were related to economics (29% of enrolment). Master programmes offered by university colleges are always within the framework of an association with a university, with the exception of master programmes in arts, which are offered by Schools of Arts. Universities offer first, second and third cycle academic-oriented programmes.

The university colleges' bachelor degrees are profession-oriented and provide students with general and specific knowledge and skills necessary for the independent exercise of a profession. The professional bachelor qualification allows university college graduates to enter the labour market after completion of a three-year study (180 ECTS). Gaining practical work experience is an integrated part of the study programmes.[3]

2 As it is cumbersome to write about 'higher education systems' and 'jurisdictions' all the time, sometimes we use 'nation' and 'national' even when this includes Flanders and North Rhine-Westphalia.

3 See: https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Belgium-Flemish-Community:Bachelor#Employability (accessed 04-04-2014).

VLHORA is the umbrella organization of the Flemish university colleges. The organisation aims to defend and promote the mutual interests of the university colleges.

2.1.2 / Guiding principles for input phase

The national qualification framework of Flanders outlines the specific level descriptors of bachelor programmes with a professional orientation, which are (Flemish Ministry of Education, 2008: p. 18):

- 'General competences such as the capacity for logical thought and reasoning, the ability to acquire and process information, the ability for critical reflection and project-based work, creativity, the ability to perform simple supervision tasks, the ability to communicate information, ideas, problems and solutions to both specialists as well as laymen, and a positive attitude towards life-long learning.
- General professional competences like the ability to work together as part of a team, a solution-oriented attitude in the sense of being able to define and analyse independently complex problematic situations in professional practice, and the ability to develop and apply effective strategies to solve them, and to develop a sense of social responsibility in connection with the professional practice.
- Specific professional competences at the level of a newly-qualified professional.'

In addition to incorporating the specific level descriptors, all study programmes in Flanders are required to have a validated set of around 15 domain-specific learning outcomes by 2017-2018 (VLIR/VLHORA, 2012). The initial domain-specific learning outcomes are drafted by a consultative structure consisting of similar study programmes. The consultative structure is also responsible for aligning the domain-specific learning outcomes to the scientific and society's expectations, as well as to the international standards. In this process, feedback on the domain-specific learning outcomes is to be collected from students (or recent graduates), the professional field and domain-specific experts. Input can also be collected from the professional competency profiles as developed by the SERV Competency Team.[4]

Once the feedback is incorporated, the VLUHR checks if correct procedures have been followed and if the set of learning outcomes contributes to the profile, i.e. the distinctive features, of the study programmes. Finally, the domain-specific learning outcomes are validated by the NVAO, which looks at the followed procedures and the extent to

4 See: www.serv.be/competentieteam (accessed 04-04-2014).

which the domain-specific learning outcomes match the standards as outlined in article 58, §2, of the 'Structuurdecreet' and article 6 of the 'Decreet inzake de Vlaamse Kwalificatiestructuur'.

The visitation committees use the validated domain-specific learning outcomes as part of their external quality assurance. They check whether study programmes have incorporated the domain-specific learning outcomes. The way in which study programmes incorporate the learning outcomes is left to their discretion. Moreover, study programmes may focus on their strengths, local context (i.e. regional labour market needs) and their own specific characteristics by emphasising some of the defined learning outcomes, or perhaps even a non-domain-specific learning outcome. Study programmes have a similar amount of freedom in designing how employability-enhancing aspects are incorporated in the curriculum. The autonomy thus leads to similar study programmes having different curricula. In other words: a social work bachelor in West-Flanders may be different from a social work bachelor in Brussels.

Professional bachelor study programmes are supposed to have a professional field advisory board. The board is to be used to attune the study programmes to the professional field.

2.1.3 / Guiding principles for employability in process phase

Common methods with which the study programmes involve the professional field in their education and examination process include: internship (length and number may differ per domain and study programme), thesis (written as final product, normally on a topic provided by an organisation in the field), project work based on real-life cases, integrative examination (examinations that involve the professional field), and job fairs connected to interview training in the final year of the study programme.

2.1.4 / Guiding principles for results phase

Most study programmes or higher education institutions collect employability statistics themselves. This practice is spreading, improving and is becoming more systematic. Domain-specific studies on labour market needs are done at the Flemish system level. Study programmes may use this information to determine the quantitative and qualitative needs of the labour market.

2.1.5 / Employability in external quality assurance

The domain-specific learning outcomes have to be in line with the professional field. The NVAO validates the domain-specific learning outcomes and they are used by the visiting committees in the accreditation process, as described above. Likewise, visiting committees check if study programmes established a professional field advisory board and communicate with the professional field. Hence, the study programmes must show they have linkages with the professional field during the input and process phases.

2.2 / The Netherlands

2.2.1 / The higher education system

The Dutch higher education system is binary, and consists of a university sector and a universities of applied sciences sector. Formally, the universities of applied sciences became part of the higher education system in 1986. Until then, many were active as part of the secondary education system (De Weert & Boezerooy, 2007). There are 17 universities and 39 government-funded universities of applied sciences[5]. In 2012, 421,560 students were enrolled in the universities of applied sciences. The most popular fields of study belonged to the area of economics (40% of the enrolments). In the same year, the universities hosted 239,755 students. The two most popular fields of study at universities were related to behavioural and social sciences (20%) and economics (16%).

Universities provide academically-oriented first, second and third cycle degrees. Universities of applied sciences mainly offer profession-oriented first cycle degrees, but also second cycle degrees, which are publicly funded in a limited number of cases. The first cycle degrees are geared towards entering the labour market upon completion of the study. As in their Flemish counterparts, gaining practical work experience is an integrated part of the study programmes. The universities of applied sciences aim to be in close contact with the labour market. Contacts with the professional field take place on both national and individual course level.[6]

The length of the bachelor programmes at the universities of applied sciences is normally four years (240 ECTS). The Dutch

5 Four of the 17 universities are small theological and humanistic universities; one is the Open University.

6 See: webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Netherlands:Bachelor#Employability (accessed 04-04-2014).

secondary education qualification with which one is admissible to profession-oriented bachelor programmes ('havo') is a five-year stream. Consequently, students typically enrol in the Dutch profession-oriented bachelor programmes one year earlier, compared to Flanders. However, sizable proportions of students enrol through alternative routes, either through pre-university secondary school ('vwo', six-year stream) or through vocational education ('mbo'), leading to a high degree of diversity among incoming students' competences, learning attitudes and orientations (HBO-raad, 2012).

The Netherlands Association of Universities of Applied Sciences (Vereniging Hogescholen) focuses on strengthening the social position of the institutions. It does so by maintaining contacts with a broad range of people and organisations, transferral of knowledge about higher education and by providing information, and by offering a platform for cooperation.

2.2.2 / Guiding principles for input phase

The Dutch national qualification framework refers to the generic learning outcomes per level in terms of knowledge, skills and competences as outlined in the Dublin Descriptors and in the Framework for Qualifications of the European Higher Education Area. To relate the study programmes' learning outcomes to the general Dublin Descriptors, programme-specific level descriptors are formulated in profession profiles (Ministry of Education, Culture and Sciences, 2008).

The Dutch study programmes have agreed the profession profiles through national study programme consultations in which the professional field representatives and other stakeholders were involved. The profession profiles set the domain-specific learning outcomes for the study programmes in broad terms. The study programmes may adjust the profiles to their local context: the institution's profile, region, or unique characteristics of the study programme. The profession profiles are used by the visiting committees in external quality assurance.

In 2005, the Association of Universities of Applied Sciences, together with the Association of Universities, the Confederation of Netherlands Industry and Employers (VNO-NCW) and MKB-Nederland (the organisation for small and medium-sized enterprises) signed a covenant on how the linkage between the professional field and study programmes could be secured on a collective level (Vereniging Hogescholen, 2013). The covenant covers issues such as the role of the professional field in determining profession profiles, inclusion of the profiles in a public database,[7] representatives in the national consultation structures, and frequency of the meetings of the consultative structures (at least twice a year).

All study programmes are required to have a permanent consultative structure that links the study programme to the professional field. Most study programmes do so by appointing a professional field advisory board. The board, amongst other things, looks at the domain-specific learning outcomes in relation to the learning outcomes of their study programme. The boards increasingly consist of critical representatives of the professional field that are not directly linked to the study programme.

2.2.3 / Guiding principles for employability in process phase

Common practices of study programmes to link the study programme's education and examination to the professional field include: internships, guest lectures, project work, and inclusion of representatives of the professional field in the examination of final theses. The role of the professional field in examinations is developing to ensure that the student has attained the set standards, particularly with respect to the final assessment (the graduation thesis). Besides, study programmes increasingly cooperate with other study programmes in evaluating theses of each other's graduates.

2.2.4 / Guiding principles for results phase

Annually the Association of Universities of Applied Sciences conducts a graduate survey ('HBO Monitor'), which generates insight into the labour market position of (recent) graduates of universities of applied sciences. Study programmes use the outcomes to show their employability results.

Detailed information on the quantitative and qualitative needs of the labour market appears not to be collected systematically on national level. Consequently, gaining such insight is largely left to the study programmes or their institutions.

2.2.5 / Employability in external quality assurance

The extended version of programme-specific accreditation stimulated study programmes to establish professional field advisory boards and to link the programme to the domain-specific learning outcomes. The new limited

7 See: www.verenigingh ogescholen.nl/opleidingsprofielen (accessed 04-04-2014).

programme accreditation includes fewer aspects and the links to the domain-specific learning outcomes are more vague; establishing those links becomes more of an issue in the institutional audit that precedes limited programme accreditation.[8] Nevertheless, visiting committee for professional bachelor programmes will continue to ask how the programmes have included the professional field.

2.3 / Germany / North Rhine-Westphalia

2.3.1 / The higher education system

In Germany, education legislation and administration are primarily the responsibility of the federal states. The main types of higher education institutions are universities of applied sciences and universities. In 1970, universities of applied sciences were introduced into the German higher education system (Kaulisch & Huisman, 2007).

Overall, Germany has 108 universities and 216 universities of applied sciences, which host respectively 1,611,664 and 792,837 students (2012/2013). Most students (30%) are enrolled in legal, economic and social sciences studies, followed by engineering programmes (20%). In North Rhine-Westphalia, the largest federal state, there are at present around 35 universities of applied sciences and around 15 universities. In 2012/2013, 644,612 students were enrolled in North Rhine-Westphalia.[9]

Universities provide academically-oriented first, second and third cycle degrees. Universities of applied sciences mainly offer professionally-oriented first cycle, second cycle, and in some cases third cycle education (the third cycle degree is granted by a cooperating university; actual supervision may take place in the university of applied sciences). Of the total six (180 ECTS) or seven (210 ECTS) semesters of first-cycle study programmes in universities of applied sciences, students normally spend one or two semesters in internships. Dedicated student counselling offices at universities of applied sciences provide information and guidance to graduates' transition to the labour market (Kaulisch & Huisman, 2007).

The German Rectors' Conference represents the interests of 83 universities and 118 universities of applied sciences. It provides a forum for forming joint policies and practices on topics relevant to its members, such as: research, teaching and learning, continuing professional education for academics, knowledge and technology transfer, international cooperation, and administrative self-management.

2.3.2 / Guiding principles for input phase

German study programmes must adjust their learning outcomes to the national qualification framework. However, no uniform domain-specific learning outcomes have been defined for the domains of engineering, tourism, and social work, which are included in our study. Some academic communities have come up with some criteria and learning outcomes, for example for mechanical engineering. However, neither do these initiatives put study programmes under any obligation to apply them, nor are domain-specific learning outcomes part of external quality assurance.

Consequently, German study programmes have a high degree of freedom in determining their learning outcomes. The learning outcomes are usually set by teachers. Many teachers working for universities of applied sciences have experience in the professional field, thus creating a link between the professional field and the input phase. In some cases the learning outcomes are determined with the help of a professional field advisory board. It is not mandatory for study programmes or higher education institutions to have a professional field advisory board.

Universities of applied sciences can decide to make study programmes more practically than academically oriented. Consequently, there are universities of applied sciences for which it is very important to have strong relationships with the economy and companies around them, whilst in regions where the labour market is not so strong, programmes may decide upon a more academic approach. Irrespective of the main orientation, all bachelor study programmes need to have aspects of both sides included in the curriculum.

2.3.3 / Guiding principles for employability in process phase

Common practices of study programmes to link their education and examination to the professional field are: internships, guest lecturers, language modules, communication skills, career trainings, projects, and through teachers who have professional or work experience. Having internship periods is not mandatory.

8 In institutions that do not successfully go through an institutional audit, the extended programme accreditation remains in force.

9 Data collected from: www.destatis.de/EN/FactsFigures/SocietyState/EducationResearchCulture/InstitutionsHigherEducation/InstitutionsHigherEducation.html (accessed 04-04-2014)

2.3.4 / Guiding principles for results phase

Following national guidelines from the national Accreditation Council, study programmes normally provide employability statistics for the accreditation process. The validity of the statistics is not checked routinely.

Rankings of higher education institutions and study programmes collect information on employability. A prime example is the CHE University Ranking, which for the employability indicator evaluates the promotion of methodological skills, social skills and the inclusion of work practice.

Detailed information on the quantitative and qualitative needs of the labour market appears not to be collected systematically on national level. Consequently, gaining such insight is largely left to the study programmes or their institutions.

2.3.5 / Employability in external quality assurance

In external quality assurance, expert panels normally ask how study programmes are attuned to their professional field. Study programmes must show that their graduates are able to take up a qualified job. The quality of graduation theses is also reviewed in the re-accreditation process. Recently, it became mandatory for expert panels to include members from the professional field.

As there are no guidelines that define the extent to which institutions, in particular universities of applied sciences, should have links with the professional field, accreditation organisations cannot determine if the links mentioned during the accreditation process are sufficient. Given this limitation, accreditation agencies would hardly deny accreditation to study programmes on the basis of weak links with the professional field.

2.4 / Ireland

2.4.1 / The higher education system

The Irish higher education system consists of 7 universities, 14 institutes of technology, 7 colleges of education, and 15 other institutions. Universities as well as institutes of technology offer first, second and third cycle degrees. There are two types of first cycle degrees: ordinary and honour. The ordinary bachelor degree normally takes 3 years to complete (180 ECTS). The honours bachelor degree can be completed in 3 or 4 years (180–240 ECTS). The honours degree can also be a one-year (60 ECTS) add-on for ordinary degree graduates. In 2011/2012, there were 89,928 full-time students in the university sector and 63,874 in the institutes of technology sector.

In 1970, the first institutes of technology were established. Institutes of technology have developed links with employer bodies in their regions and offer career guidance to their students.[10] Important to note is that education offered by the institutes of technology is not referred to as professional, but as higher education and training programmes with a vocational orientation.

As outlined in the National Strategy for Higher Education to 2030 (Department of Education and Skills, 2011), the connection of higher education institutions and their study programmes to the labour market is to be developed further. It is seen as an important part of Ireland's strategy to overcome the effects of the economic crisis. As part of the national strategy, the government has decided that a rationalisation will occur, meaning that the higher education institutions are to intensify their cooperation, through which duplication of study programmes is to be reduced and avoided. Goals include also creating more synergy in the area of research and in the connections with the local labour market. As part of the rationalisations, some institutes of technology are aiming to become technical universities.

Institutes of Technology Ireland (IOTI) is the representative body of the institutes of technology. According to IOTI's website: 'The institutes provide programmes that reflect current and emerging knowledge and practices and promote self-management, critical analysis, decision making and entrepreneurship. They foster graduates ready to undertake roles, responsibilities and challenges in business, industry, the professions, public services and society.'[11]

2.4.2 / Guiding principles for input phase

The Irish national framework of qualifications makes a distinction between two types of bachelors: ordinary bachelor degree (level 7) and honours bachelor degree (level 8). Both types have distinct learning outcomes. Incorporation of these learning outcomes determines on what level a study programme is.

10 See: webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Ireland:Bachelor#6_Employability (accessed 04-04-2014)
11 http://www.ioti.ie/about-us/about-us (accessed 17-07-2013)

In addition to the existing national framework of qualifications, a process started to determine domain-specific learning outcomes in particular fields of study. When developing programmes, institutions are expected to refer to the descriptors of the levels and the domain-specific guidelines. The guidelines provide a national rubric, but also allow for full local development of programmes and innovative developments.

When developing the domain-specific standards, nationally the professional bodies, the educators (universities and institutes of technology), and other constituents are invited to be part of the national development group. Also employers are requested to contribute to the domain-specific learning outcomes. Domain-specific learning outcomes have not yet been established for every area. The guiding principles for the input phase leave room for study programmes to adjust their programmes to the local context.

2.4.3 / Guiding principles for employability in process phase

The institutes of technology have a high degree of autonomy in deciding how they link the study programme's education and examination to the professional field. For instance, an internship period is not mandatory. Moreover, for some programmes the internship takes place after graduation. Noteworthy practices of institutes of technology that create a link with the professional field are: incubation centres on campus, recognition of prior learning, adult education, action learning, and entrepreneurship development.

In Ireland it is common that external examiners evaluate all aspects of the programme, particularly the modules and the examination. Normally one of the examiners is a professional from the field.

2.4.4 / Guiding principles for results phase

As part of the regular programmatic review, institutions must show to have an understanding of the destination of graduates. Therefore, the institutes of technology hold their own first destination surveys, in which employability statistics are collected.

There are many national agencies monitoring regularly where national skill gaps exist in the market place and where new study programmes are needed. The institutes of technology are required to act on these particular reports on an on-going basis, and when necessary rapidly develop new programme to ensure that they adequately address the identified skill gaps.

As part of the accreditation guidelines, study programmes must demonstrate the demand for their programmes, and do so built on research.

2.4.5 / Employability in external quality assurance

Quality & Qualifications Ireland (QQI) assures the academic validation and evaluation of study programmes. As part of the evaluation, all study programmes must ensure that the programme is: at the right level, relevant to the labour market, fit for purpose, and focused on employability.

Professional bodies award professional recognition to study programmes in their field. Professional bodies can set standards related to the link between the study programme and the professional field, for example in terms of guidelines for internships. Graduates from study programmes that have been accredited by a professional body are eligible to carry a registered professional title, as for example is the case for engineers through Engineers Ireland. Not every field of study has a related professional body. Nevertheless, all institutions are expected to put their own experts' team together from various constituencies to develop their specific local programmes. The constituencies include employers and university representatives.

2.5 / Summary and conclusion

In this chapter we described the national guiding principles for institutions offering professionally oriented bachelor programmes. They influence how the programmes incorporate employability aspects in their programmes. As expected, the guiding principles in every higher education system differ somewhat, resulting in different requirements in all the four phases. Relevant is also that the requirements change over time. For example, Ireland and Flanders are in the process of developing domain-specific learning outcomes. As they did the Netherlands, once set such domain-specific learning outcomes will affect the input mechanisms of study programmes. This chapter also hints on the employability enhancing methods and mechanisms we can expect to find in the process phase (see Chapter 4). Important to note here is that there are hardly any obligatory guiding principles on national level, yet study programmes use common methods, such as internships and project work. Practices in the results phase are equally context dependant; in the Netherlands employability statistics are collected nationally, whilst in Ireland institutions are required to collect the statistics themselves. Although the collection methods differ, employability

statistics are reported on in the accreditation process by most study programmes. Hence, employability is also an aspect in the external quality assurance, but the intensity varies from programmes indicating their linkages (Germany) to the review commission talking themselves to the professional field (Flanders). The guiding principles for the different phases leave room for study programmes to enhance the employability of students in ways they judge best. The practices of the selected study programmes will be discussed in the next chapters.

Chapter 3

Input: domain-specific learning outcomes as basis for curricula

The first phase in the education and quality assurance process concerns the extent to which domain-specific learning outcomes are used as the basis on which study programmes design their curricula.

The research question and sub-questions posed to look into the input phase are the following:

Input: how is the translation of domain-specific learning outcomes per study programme organised?

a. To which degree and how do the envisioned study programme specific learning outcomes reflect the domain-specific learning outcomes?
   - Do study programmes take the professional field into account?
   - Do the study programmes adjust the domain-specific learning outcomes to the institution's profile and local context?

b. With which methods and mechanisms are the intended learning outcomes of professional bachelors' study programmes attuned to the professional field?
   - Possible methods or mechanisms are usage of professional field advisory boards and usage of national qualifications frameworks.

The following sections will discuss research questions 1a, 1b and the main research question respectively. Included here are the outcomes of interviews with experts from study programme consultative structures on system-level and experts within study programmes or higher education institutions. In each section best practises are recognised and highlighted.

3.1 / Domain-specific learning outcomes reflected in the programme-specific learning outcomes

3.1.1 / Practices in the field of mechanical engineering/electro mechanics

Domain-specific learning outcomes for engineering programmes have been defined and validated by the professional field in the Netherlands and in Ireland. In the Netherlands the broad learning outcomes have been outlined in the competence profile Bachelor of Engineering (HBO-Engineering, 2012). On the basis of the profile, the sector is currently in the process of translating the competences into knowledge, skills and attitudes of (mechanical) engineering graduates in more detail (i.e. the body of knowledge and skills). The minimum requirements are basically what mechanical engineering students should learn in the first 2 to 2.5 years of the study programme. After this period, the study programme can focus on knowledge and skills relevant for the region, i.e. the specialisation period.

The competence profile and now also the body of knowledge and skills are created through a consultative structure involving all mechanical engineering study programmes in the Netherlands as well as representative organisations and companies in the field of engineering. A Dutch professional field organisation (PF ME NL) was involved in the development of the competence profile; it had a governing role and also supplied input. The professional field organisation is currently involved in the creation of the body of knowledge and skills. The professional field organisation shared the following insights on the process of creating the competence profile, the body of knowledge and skills and the working of the professional field advisory boards (INT PF ME NL):

- Implementation of the competence profile into the study programmes is not going flawlessly. Many study programmes began translating the competence profile in their curriculum before the competence profile was finalised, resulting in incomplete translation of the competence profile.
- The translation of the competence profile into a body of knowledge and skills is supposedly problematic, as in the eyes of the professional field organisation the process is not organised professionally in the universities of applied sciences.
- The creation of the body of knowledge and skills appears to be a bureaucratic process rather than an educational development process. Study programmes started by finding common grounds between their individual programmes, rather than taking the competence profile as the point of departure.
- Similar as was found for the construction engineering study programmes (ECORYS, 2013), the impact of the professional field advisory boards of the study programmes on the study programmes and their focus on the inclusion of the domain-specific learning outcomes varies between study programmes. The professional field organisation argues that to create more consistency further attention is required (INT PF ME NL).

In Ireland the professional body, Engineers Ireland, has determined the domain-specific learning outcomes for all engineering study programmes. Accreditation by Engineers Ireland is needed for graduates to carry a registered professional title. Study programmes that seek accreditation must incorporate the domain-specific learning outcomes in their curricula. The domain-specific learning outcomes are based on international engineering guidelines (the Washington–Sydney Accord) and describe, for example, the needed knowledge and understanding of mathematics and science as well the required soft skills and problem-solving skills. Emphasis is also placed on the need for graduates to be open to life-long learning. The nature of the knowledge and skills required differ by academic level.

How the domain-specific learning outcomes are translated into the study programme is largely left to the discretion of the study programmes themselves. However, both in the Netherlands and in Ireland external quality assurance procedures evaluate *whether* they have done so. Engineers Ireland's panels that review mechanical engineering bachelor programmes consist of three persons: two academics (from Ireland) and one industry practitioner. The Irish engineering programmes are to map their learning outcomes to the domain-specific learning outcomes. The resulting matrix is used by the panel to assess whether the domain-specific learning outcomes have been sufficiently included (INT PF ME IR). Inclusion of teachers/researchers in the panel makes the quality assurance process a peer review exercise, through which study programmes can also learn from each other (INT PF ME IR).

Both in the Netherlands and in Ireland the domain-specific learning outcomes set for mechanical engineering study programmes allow further specialisation based on the needs of the region or on the profile of the institution. The mechanical engineering bachelor programmes in the Netherlands included specialisations based on regional demands in: product engineering, polymer engineering (INT ME NL 1), and agriculture and process industry (INT ME NL 2). Similarly, study programmes in Flanders and in Germany include specialisations relevant to the regional environment.
The degree to which study programmes adjust their learning outcomes varies from a strong focus on the region (INT ME DE 1) to a more broad national focus (INT ME DE 2).

The specialisations can reflect regional or local innovation initiatives, as was seen with the inclusion of polymer engineering (INT ME NL 1). Interestingly, regional or local innovation initiatives and policies do not have to be translated in to specialisation to have an influence in study programmes; a mechanical engineering study programme in Ireland included a practice module to draw students' attention to the regionally and nationally available funding mechanisms (INT ME IE 2).

In addition to the regional or broader national needs, the profile of the institution also influences the orientation of mechanical engineering study programmes. Examples of institutional profiles that are incorporated in the curricula include: educate valuable professionals (INT ME NL 1), sustainability (INT ME NL 2), talent development (INT EM FL 2), innovation, and entrepreneurship (both INT ME IE 1).

3.1.2 / Practices in the field of social work/care

Domain-specific learning outcomes for social work programmes have been defined in the Netherlands and in Flanders. No domain-specific learning outcomes for social work have been set in Germany. In Ireland they are scheduled to be introduced once CORU, Ireland's health profession regulator, opens the social care registration board for social care practitioners. The requirements of CORU will affect the content of the social care programmes, as well as the included expected skills and knowledge (INT PF SC IE). The requirements will be based on consultations with employers, educators, public infrastructure representatives, peer organisations (QQI) and professional body representatives (trade union, etc.) (INT PF SC IE). Once the requirements will have been set, the programmes must map their learning outcomes against the standards and do so through providing documentation of quality assurance to the registration board. The documentation includes information on previous quality assurance by external examiners, institutional quality assurance, and any professional body accreditation that the programme may have achieved. The registration board looks at the provided documentation and decides whether to grant qualification approval. This is followed by programme approval and monitoring. The current learning outcomes included in social care programmes in Ireland evolved from a government report published 20–25 years ago (INT SC IE 1). The report looked into the basic training needs of social care students, for which employers were consulted. Hence, the expected learning outcomes still in use came from both the government and the employers.

In 2008, the Dutch social work study programmes agreed domain-specific learning outcomes with employers and social workers' representative bodies (SAC HSAO, 2008). The resulting intended learning outcomes are based on six competence clusters.[12] All social work study programmes in the Netherlands have translated the domain-specific learning outcomes into specific sets of intended learning outcomes (INT SW NL 1). By doing so, the study programmes have created a link to the professional field.

In Flanders the domain-specific learning outcomes have been developed between 2009 and 2011 by all social work study programmes. In this process the study programmes' professional field advisory boards were consulted, but other employers or representative bodies of the sector were not. Sector consultation will take place in the future; till then the study programmes themselves only validate the agreed-upon domain-specific competences. Every social work study programme in Flanders should use the domain-specific learning outcomes as a point of reference. Programmes may choose not to follow some of the learning outcomes or related competences, if they provide a motivation (INT SW FL 1). Moreover, the domain-specific learning outcomes are described in broad terms, leaving flexibility for the study programmes to translate them into the curricula (INT SW FL 2).

The social work/care programmes in all four higher education systems have adjusted their study-specific learning outcomes to the institution's profile and local context, also when these were not based upon domain-specific learning outcomes. Examples are given in Box 3.1.

Box 3.1: Examples of learning outcomes adjusted to institution's profiles and local context

SW NL 1: The institution's Christian foundation is reflected in the inclusion of the 'ideological anchoring' competence. The competence is reflected upon in study career counselling, in admission and in staff hiring policies.

SC IE 2: The institution has a focus on sustainability and entrepreneurship. These two aspects have been incorporated in the study programme through a module on innovation and entrepreneurship in social care.

SW NL 2: The study programme has a number of specialisations, amongst which youth welfare, which have been established because many graduates find employment in these sectors. Also the specialisations were in demand from the professional field in the region.

SC IE 1: The study programme is adjusted to the local context through its emphasis on family and community support. It is a two-way process; the study programme also influences the professional field by how students are trained.

Adjusting can be a two-way process and can go beyond learning outcomes. A Flemish programme (INT SW FL 1) indicates that not only it receives advice through structured cooperation with the professional field, but also the programme plays a guiding role to the professional field (e.g. related to introduction of bachelor and master degrees in Flanders).

The social work/care programmes focus on being embedded in the region and on maintaining links to regional partners and employers. For example, one Dutch social work programme mentioned having many contacts with provincial authorities, both on institutional and departmental level, with a view to contributing to the economic development of the region (INT SW FL 2).

An Irish study programme (INT SC IE 1) predicted that its accountability pressures would increase once social care practitioners have to be registered. Then, if a practitioner would do something wrong, it would negatively reflect on the study programme. Hence, social care programmes will have more incentives to make sure their graduates are employable.

12 1: Explore, analyse, and define, 2: The specific nature of social work, 3: Working in or from a business or organisation, 4: The professional's own personal qualities as instruments for social work, 5: Developing research, 6: Learning (SAC HSAO, 2008).

3.1.3 / Practices in the field of tourism

The domain-specific learning outcomes for tourism programmes have been defined in the Netherlands and in Flanders. In Germany, the study programmes must adjust their learning outcomes to the national qualification framework. The framework requires that employers be included in the curriculum development process. In Ireland there is no professional body for tourism to set domain-specific learning outcomes (INT TO IE 2) as there is no organisation that provides professional qualifications in the sector. The diversity of the tourism sector was mentioned as a reason for the absence of a single representative body (INT TO IE 1).

In the Netherlands the tourism programmes grant a Bachelor of Business Administration (BBA) degree. For all study programmes that grant BBA degrees, domain-specific competences have been defined in 2005 (HBO-raad, 2005), and were in the process of being updated during our study (INT TO NL 2). Building on the domain-specific competences, the study programmes granting BBA degrees collected and published a catalogue of knowledge and skills expected from graduates (HBO-raad, 2008). In 2009, a profile document describing the programme-specific learning outcomes and competences was drafted by the four tourism study programmes in the Netherlands (Hoger Toeristisch Recreatief Onderwijs, 2009). They did so in cooperation with representatives of the professional field, creating a list of ten competences for tourism and leisure managers.

The interviewed professional field representative body in the Netherlands (PF TO NL) obtains its input from different actors from the field, e.g. HR-managers, educators within organisations, and the body's steering committee on labour issues and education, which led to emphasis being put on HR-skills, and research skills. The representative body is also involved in the programmes' professional field advisory boards. This interaction with the study programmes gives a more direct and timely influence, which is needed because the domain-specific learning outcomes are fixed for a time span of six years. A six-year period might be too long for a rapidly changing sector like tourism (INT PF TO NL).

In Flanders the tourism programmes have determined the domain-specific learning outcomes jointly. The study programmes' goal was to make the domain-specific learning outcomes general enough to allow room for the profiles of the individual study programmes (INT TO FL 1). For example, one of the programmes has a focus on marketing (INT TO FL 1). In determining the learning outcomes no direct input from the professional field was included; the field was not involved in the initial process (INT TO FL 2). The documents on learning outcomes were in the decision process during our study. In that process, the VLUHR asks different stakeholders, students, the professional field, and domain-specific and international experts to review the learning outcomes agreed among the study programmes. The VLUHR does so through focus groups or paper-based evaluations. The domain-specific learning outcomes of tourism were being reviewed by private (i.a. tour operators) and public (Toerisme Vlaanderen & Toerisme Limburg) organisations. The employers had already suggested that entrepreneurship competences should be given more emphasis.

Both in the Netherlands and in Flanders the domain-specific learning outcomes are broad enough to allow for flexibility in the translation of the domain-specific learning outcomes to the study programme specific learning outcomes. Study-programme level respondents say that flexibility in translating the domain-specific learning outcomes to the study programmes is a must because in the rapidly changing tourism and recreation field, content of the study programme may lose its relevance quickly (INT TO NL 2). Section 3.3.3 discusses the methods and mechanisms used by the tourism study programmes to attune their learning outcomes to the professional field.

When constructing study programme specific learning outcomes, all study programmes in our study considered their local, national and international environments. Compared with the other two fields of study included in this research project, the consideration of the international environment appears to be stronger in tourism study programmes. Necessarily then, the focus on the local environment seems weaker. Perhaps one of the reasons for the international orientation is that tourism graduates need to be more mobile as regional and national job opportunities in tourism are becoming increasingly limited, especially in the Netherlands and Ireland.

The international focus explicitly shows in one of the German study programmes, which educates all students in English, has a high proportion of international staff (more than 1/3 have an international background), has a large international students community (more than 50 nationalities), and has a strong international component through dual degree programmes where students go abroad for at least one year and possibly also do an internship abroad (INT TO DE 1). The focus on the international context is an explicit aspect of the institution's profile (INT TO DE 1).

Other institution-specific profiles that have influenced the study programmes' learning outcomes include:

- The institution's strategy focuses on entrepreneurship, imagineering, and cross-cultural practice (business in an international environment) (INT TO NL 1).
- Goal is to include multidisciplinary problems in the curriculum; meaning problems in which technology influence tourism and recreation (INT TO NL 2).
- The mission and the vision of the institution include innovation, which requires the study programme to be closely aligned to the professional field (INT TO FL 1).
- The broad vision is the institution's focus on preparing the students for careers in the region and internationally (INT TO IE 1).

In all countries included in this study, a substantial proportion of tourism graduates find employment in non-tourism sectors. We see three possible explanations for these phenomena:

1. There are limited job opportunities in the tourism sector, or conditions in other sectors are better.
2. The study programmes do not manage to timely align the learning outcomes to the needs of the tourism sector, rendering the graduates less employable in the tourism sector.
3. The learning outcomes of the tourism study programmes are also relevant to other sectors (general or transferable skills).

A Dutch study programme analysed the first and second possibilities. It found that there are fewer job opportunities in the traditional tourism organisations because of technological developments. Yet it sees that world-wide tourism is growing, providing new job opportunities. These are different jobs, compared with ten years ago (INT TO NL 1).

3.2 / Attuning the study programmes to the professional fields

3.2.1 / Practices in the field of mechanical engineering/electro mechanics

The field of mechanical engineering appears to be fairly static in terms of what the professional field expects the study programmes to include in their curricula; there are no dramatic changes in theories (INT ME IE 2). Nevertheless, all but one (INT ME DE 2) interviewed study programmes continuously receive feedback from the professional field. Importantly, the collection of feedback is done irrespective of whether domain-specific learning outcomes have been defined.

The methods and mechanisms with which the intended learning outcomes of the study programmes are attuned to the professional field differ among higher education systems and also among study programmes. A distinction can be made between methods that are structural and formal vs. methods that have a more non-structural and informal character. The structural or formal methods include:

- National qualification frameworks and national policies. An example of the latter is the inclusion of research skills in the professional bachelor programmes in the Netherlands (INT ME NL 2).
- Profession profiles as determined by a governmental agency (INT EM FL 1).
- Input through domain-specific learning outcomes as determined (jointly) by the professional field (INT ME NL 1, INT ME NL 2, INT ME IE 1, INT ME IE 2).
- Discussions with the study programme's professional field advisory board on whether the achieved learning outcomes are relevant to the professional field (INT ME NL 1, INT ME NL 2, INT EM FL 1). Members of the advisory boards are often from the region. Study programmes differ with respect to the seniority of the advisory board members (i.e. CEO level or 'shop-floor' professionals). At the time of the interview, the two mechanical engineering study programmes in Ireland did not have professional field advisory boards. One was considering establishing one (INT ME IE 1).
- Feedback from internship-hosting organisations, collected when academic supervisors visit the student on site (INT ME NL 2).
- Systematic surveys among employers or alumni, in which feedback is asked on the learned competences vs. the needed competences (INT EM FL 1, INT EM FL 2, INT EM FL 2). Some study programmes hold surveys among employers and alumni on an irregular basis (INT ME DE 1, INT ME IE 1).
- Annual focus meetings with employers (INT ME IE 1).

The non-structural or informal methods include:

- Talks with industry, for example during a fair in the city (INT ME DE 1) or through involvement of the industry in the research centre of the study programme (INT ME IE 2).
- Irregular analysis of vacancies, to see what a graduate in electro mechanics should know and be able to do (INT EM FL 1).

- Insights from similar study programmes nationally and internationally (INT EM FL 1).
- Academic staff with experience in the professional field providing input to the study programme (INT ME DE 1, INT ME IE 2).
- Monitoring international documents related to the trends and developments in the sector (INT ME IE 1).

The mechanical engineering study programmes that have established an integral approach to attune the learning outcomes to the professional field can be seen as good practices. One case of such a good practice is described the box below (INT EM FL 2).

Box 3.2: Integral approach to attune the learning outcomes to the professional field, practice INT EM FL 2

For the establishment of a new curriculum, talks with the professional field were organised in so-called industry days. The large employers in the field, active in different specialisations, were invited. Over three days the representatives, all very experienced engineers and managers, engaged in workgroups to develop the content of the curriculum's modules. Suggestions were collected and translated to competences to be achieved in the modules (ECTS fiches). This input was used to construct a new curriculum. During their lectures, teachers point out the competences to students, and the relevance of the competences in the professional field.

The new curriculum was implemented in year 2013/2014, meaning that it will take until 2016 before the first students graduate from the new curriculum. In the third year, the achieved competences will be evaluated by surveying employers and students. Students will be asked if they think they attained the intended competences. Also all supervisors from the companies hosting interns will be surveyed. They will be asked what they think the interns should know and be able to do (i.e. the expectations), as well as what the actual results are (i.e. whether interns meet the expectations).

The results of the surveys will be used to improve the curriculum, which means that the curriculum goes through a full cycle in which the professional field has a prominent role in determining and evaluating the competences included in the study programme.

Engineering companies appear willing to provide input, when asked by study programmes. The organisations that are in need of employees with specific specialisations appear to be more pro-active than employers looking for engineers with generic skills (INT EM FL 2). Study programmes have incorporated different strategies to adopt and adapt the input from employers:

- The professional field advisory board has been made large enough to accommodate many different interests (INT EM FL 1). In this respect the professional field representative body in the Netherlands says that the advisory boards should be able to reflect on both local and national trends (INT PF ME NL).
- The professional field is not asked for input because the opinions of employers are not consistent. The academics determine the content of the study programme (INT ME DE 2).

3.2.2 / Practices in the field of social work/care

The social work/care professional field is characterised by many specialisations and by many different employers. The sector developed this structure over the past decades. A question discussed in the Netherlands is whether and how one might combine the many specialisations in one broad social work programme (INT PF SW NL). Social work programmes are heterogeneous; some included specialisations that others did not. An example is human resource management, which is a specialisation in Flanders but not in the Netherlands, Germany, or Ireland. Furthermore, in Flanders, Germany and in the future in the Netherlands and Ireland, social (care) workers in particular specialisations need to be registered to practise their profession (INT ME FL 1, INT ME DE 2, INT PF SW NL, INT PF SC IE).

The Dutch social work programmes created a link to the professional field by translating the domain-specific learning outcomes to the study programmes. In addition and similar to the social work programmes in the other countries study programme specific learning outcomes are also linked to the professional field. Programmes in Flanders, the Netherlands and Germany have professional field advisory boards to maintain the linkage as well. The roles and composition of the boards differ, as the following examples show:

- SW NL 1: The professional field advisory board consists of people from the professional field nationwide; not necessarily from the region. The study programme's network is used to invite representatives. Although the board does not have a very pro-active role, it provides feedback on the

programme's learning outcomes and competences. An additional task is to give input to the curriculum committee.

- SW NL 2: The professional field advisory board includes people from the professional field, preferably at board-member level. One of the tasks of the board is to connect the programme to the professional field. In addition there is a study programme committee, which includes students and occasionally representatives from the professional field.
- SW FL 1: The professional field advisory board of the programme was consulted for setting the domain-specific learning outcomes. The board has to have a broad perspective on all issues related to the study programme. The board consists of directors from organisations in the professional field. The advisory board does not have a regional focus; members are recruited nation-wide. In addition there are advisory groups for each of the four graduation tracks/majors. These advisory groups consist of someone responsible for the domain, two lecturers, two guest lecturers, and six to eight advisors from the sector. The latter were selected for their professional experience; the main criterion is that they are currently active in jobs intended for bachelor graduates, i.e. operational-level professionals. The advisory groups meet four times a year and discuss research, education and trends on the labour market. With respect to education, the advisory groups judge if the programme's intended competences are translatable to the specific professions in their field.
- SW FL 2: Through the professional field advisory board the field is given voice in the development of the study programme in a structured manner. The board meets several times a year. Members are actual practitioners, policy advisors and professionals who provide input for research and for the provision of services.
- SW DE 2: The study programme recently appointed a professional field advisory board, which is to meet for the first time in 2014. The board consists of around fifteen representatives of employers, in different areas of social work. They are appointed as individual members, not official representatives. However, one member was chosen for having a position that gives a good overview of a large part of the field. The board plays an official role in the accreditation process, though its main function will be to formulate expectations from employers to the study programme.

The three study programmes not mentioned in the enumeration above, use different methods and mechanisms to link the study programme to the professional field:

- SW DE 1: The study programme was initially designed without input from the professional field. Current cooperation with the professional field includes internships, guest lecturers and feedback on curriculum development through the Deutsche Gesellschaft für Soziale Arbeit.
- SC IE 1: During the original design, the study programme consulted employers about which learning outcomes the programme should have in their eyes. This established a collegial relationship in which the employers are recognised and also deliver part of the training. The study programme is mindful about input received from employers. Employers generally want a skills mix that will be useful in their organisation, however educators have to take a broader perspective and also prepare for other areas in which graduates find employment. The programme regularly checks its relevance to the professional field through contacts with employers and graduates. Graduates are asked if the attained skills and knowledge equipped them to get employed. Contacts with the professional field are informal and not embedded in organisational structures. The informality of the contacts is made possible by the study programme being in a small community and the relationships with employers were built up over time. The programme feels it should do more to create a stronger and perhaps more formal link to the professional field.
- SC IE 2: Learning outcomes were devised entirely by the study programme based on social care literature, research, and involvement with the Irish association of social care educators, which is a group of teachers across the different institutes of technology. Prior to last year's programmatic review the programme organised a focus group with representatives from different professions in social care. With one exception, the representatives were from the region, a conscious choice because most students find employment in the region. The focus group's recommendations on content and concepts of the modules were used to redraft the programme. Furthermore, employers are invited by the study programme to talk to students about the work they do.

The study programmes with professional field advisory boards also use additional methods and mechanisms to attune intended learning outcomes to the professional field:

- Teachers connect to the professional field and can therefore judge if the learning outcomes are relevant to the field (INT SW NL 1, INT SW NL 2, INT SW DE 2, INT SC IE 2).
- Feedback at conferences (INT SC IE 2), from social work profession organisations (INT SW NL 1), local sector representatives and employers' organisations (INT SW FL 1); also from internship-hosting organisations (INT SW DE 2) e.g. during the institution's professional field day (INT SW FL 2), or during an annual internship market event (INT SW DE 2).

- Informal contacts with the professional field in the region (INT SW NL 2).
- Labour market research (INT SW FL 1) and professional field surveys (INT SW FL 1, INT SW FL 2).
- In the absence of a single competence profile for social workers, insights from twelve competence profiles made by the social-economic council of Flanders are used (INT SW FL 1).

One Flemish study programme (INT SW FL 2) mentioned that the slow pace of curriculum reform is a barrier in attuning learning outcomes to the professional field. Its curriculum is fixed for a period of ten years, and it sees the bureaucratic structure of the institution as a barrier to a more dynamic approach; now each change in the curriculum needs to go through the faculty council (e.g. even a change of name of a module needs approval).

The study programmes indicate that the professional field is willing to provide feedback. However, it is often on the initiative of the study programmes themselves. One Dutch study programmes (INT SW NL 1) commented that in times of crisis employers appear to be less willing to give feedback, perhaps due to oversupply of educated social workers in the country.

3.2.3 / Practices in the field of tourism

The highly dynamic tourism sector requires the tourism study programmes to be in close contact with an increasingly diverse professional field. In the past the sector consisted mainly of the traditional travel organisations (INT TO NL 1). Now the sector increasingly consists of technology-based organisations, which require different learning outcomes, e.g. creative online marketing, or competences in media and entertainment (INT TO NL 2). Study programmes need to be aware of the latest trends and developments so that they can adapt the learning outcomes accordingly. To do so, the study programmes utilize several strategies, amongst which installing a professional field advisory board is the most common.

The professional field advisory boards are given different roles. Some are active on a strategic level, others more on an operational level. Examples of both forms are described in Boxes 3.3 and 3.4. Another distinction can be found in the compositions of the boards. Several include professionals on higher management level (INT TO NL 1, INT TO DE 1, INT TO IE 1), whist another chose to include strictly professionals on operational level (INT TO FL 1). Noteworthy is that both interviewed professional field organisations see involvement in education as part of their mission.

Box 3.3: Example of utilisation of professional field advisory board (INT TO NL 1)

The *strategic advisory council* of the study programme meets four times a year and reflects on strategic issues. An example of a topic is how the study programme can include more technology in the curriculum. Represented in the strategic advisory council are CEOs of companies mainly from the Netherlands, though not necessary from the UAS's region. On a lower level, there are separate *profession field committees* for specialisations within study programmes, where details of the study programmes are discussed (e.g. the amount of hours spent on foreign-language training).

The study programme does not have a leading coalition of companies from which they receive input. This is fitting, because most graduates find employment in SME's or start their own companies.

Box 3.4: Example of utilisation of professional field advisory board (INT TO FL 2)

The study programmes has an advisory board. Its 17 members hail from different domains of the tourism sector, and it advises on the content of the programme. Members are from Flanders, but not all from the region. Members were selected for their capacities, backgrounds and specialisations (to represent different domains in tourism).

Partly depending on the role of the professional field advisory boards, the study programmes use different methods and mechanisms to align learning outcomes to the latest trends and developments in the tourism sector. One example of the methods and mechanisms to acquire insights into the trends and developments is described in Box 3.5.

Box 3.5: Example of methods and mechanisms to acquire insights into the trends and developments (INT TO FL 1)

Three years ago the study programme made a SWOT-analysis. Special attention was given to the programme's connection with new trends and developments in the sector. Before including adjustments in the curriculum, a full academic year was taken to discuss the changes with the sector. A total of 5-6 days were invested to talk with major employers in the sector and with experts in several specialisations, all selected outside the field advisory board. It was noticed that marketing skills became increasingly important (social media, reputation & quality management, e-commerce). The outcomes were used to draft new profiles.

In addition, the study programme also monitors developments through the following methods:

- Internship visits by the lecturers. Non-tourism lecturers, e.g. English teachers, also do visits so they can align their modules to the practical field.
- Students are motivated to focus their bachelor theses on trends in the sector.
- Lecturers visits conferences, follow trainings and follow internships themselves.
- Some lecturers have professional work experience. When hiring new staff, working experience is an increasingly used requirement.
- Following trade press and online news channels.

Other practices with which the learning outcomes are linked to the professional field include:

- The experience and knowledge of teachers (INT TO NL 2, INT TO FL 2, INT TO DE 2, INT TO IE 2).
- Employing professionals from the field for a specified period or module (INT TO NL 2).
- A job vacancy analysis in which 50 vacancies were analysed by looking into the profile and position requirements (INT TO FL 1).
- A survey held among employers (INT TO FL 2)
- Through external examiners, including a senior industry professional (INT TO IE 1).

In general, the study programmes indicate that employers had a pro-active role in attuning the learning outcomes of their programme to the professional field. Especially the study programmes that appear to have extensive contact with the professional field (INT TO NL 1, INT TO NL 2, INT TO FL 1, INT TO FL 2, INT TO DE 1) are satisfied with the role of employers. As highlighted by one study programme, employers also benefit from providing input, and are therefore willing to provide it (INT TO FL 2). Cooperation with the professional field can also go beyond asking the field for input and develop more in the direction of partnership, for example in research projects (INT TO NL 1, INT TO NL 2).

3.3 / Summary and conclusion

In the input phase the study programmes take the professional field to a large extent into account. To do so the study programme use a number of methods that related to:

- Internal consultations: teachers with professional experience, professional field advisory boards, and making links to the institution's profile.
- External consultations: particularly with employers in the region, professional field representative bodies on the national level and international consultative bodies.
- System-level standards and policies: domain-specific learning outcomes, national qualification frameworks and innovation policies are applied where they exist.

The input methods used relate strongly to the countries' established guiding principles, the domain and institutional profile. All Dutch study programmes were involved in the establishment of domain-specific learning outcomes, which they translated – in some cases with additional input from the (local) professional field and/or their professional field advisory board – into their study programmes. Two of the three study domains in Flanders established domain-specific learning outcomes, though not directly together with the professional field. Perhaps this was one of the reasons why the Flemish study programmes developed rather extensive consultation processes to gain input from their (local) professional field and/or professional field advisory board. The high degree of autonomy of German study programmes is reflected in their opportunity to make their programmes either more academically or more professionally oriented. Programmes choosing the latter are often in contact with local employers. In particular the two private tourism programmes developed extensive formal linkages to the local, national and international professional field. The method chosen by Irish programmes to a large extent depended on whether the professional field grants professional titles or requires registration. In this case the field or governmental authority estab-

lishes domain-specific learning outcomes, which study programmes should translate into their curricula if they wish their graduates to be eligible for the professional title or registration.

The degree of fragmentation of sectors influences the development of domain-specific learning outcomes; for fragmented sectors like tourism it is much more difficult to develop a single set of learning outcomes. Consequently, study programmes in fragmented sector face more challenges in developing learning outcomes that apply to the whole sector. Input-related challenges caused by the fragmentation of sectors could be overcome by active representative bodies, as was the case in tourism in the Netherlands and Flanders.

In all cases, input for the study programmes was collected by formal or informal consultation with (local) employers. Whether a formal or informal approach for contacts with the professional field was chosen largely depended on the size of the study programmes and institutions. It could also be a strategic decision, as some study programmes argued that formalisation of contacts might negatively affect the willingness of employers to participate.

Chapter 4

Process: professional field aspects in education and examination

This chapter discusses the second phase in the education and quality assurance process. This phase focuses on the process of the actual incorporation of knowledge of and contact with professional fields in the education process and the examinations. More specifically, it covers the extent to which the study programmes reflect competences needed for successful employment.

The research question posed to look into the process phase is the following:

Process: how is the link between study programme and professional field arranged in education and examination?

a. Examples are teachers with professional and practical experience, internships/work placements and external examiners from the professional field.
b. Are there initiatives to enhance the employability of international students in the local labour market?

The following section will discuss the empirical data collected through interviews for this research question per field of study. We discuss the link between the study programme and the professional field in education and examination, other methods or tools implemented to enhance the employability of students, special initiatives for the employability of international students, the extent to which the learning outcomes desired by the employers are reflected in the curricula, and lastly the by the study programme and the professional field recognised good practices. Best practises of the three study domains are recognised and highlighted.

4.1 / The link between study programme and professional field in education and examination

4.1.1 / Practices in the field of mechanical engineering/electro mechanics

4.1.1.1 Link with the professional field in teaching and learning

The interviewed engineering programmes show a number of common practices to facilitate the link between teaching and learning and the professional field. Thus, all programmes incorporated elements of project-based learning. In most cases the projects are based on real-life cases, which the programmes receive from the professional field. The projects are used to enhance the teamwork and communication skills (e.g. through presentations of project results). They can also be used to enhance the peer-feedback skills (INT EM FL 1). Especially the Dutch and Flemish study programmes appear to have integrated project work in all academic years, instead of having the projects in the last stages of the study programme. An example of a project in the second academic year is described in Box 4.1.

Box 4.1: Example of project-based learning in the second academic year (INT ME NL 1)

In the second academic year, students learn how it is to be an engineer through the school's Engineers' Office. Students are employees of the Engineers' Office and they themselves have to contact engineering companies to procure 'real life' projects, on which students will work.

Inclusion of internship periods in the curriculum is also common. Exceptions are the two mechanical engineering programmes in Ireland, which instead have a strong focus on *inter alia* industry projects. Both programmes are considering re-introducing internships in their curricula. The absence of internships periods is surprising because the professional field organisation in Ireland sees internships as a key component in making the student well-rounded engineers (INT PF ME IE). The study programmes that have an internship period normally have it in the final stages of the programme. There are also some study programmes with multiple internship periods. One has an internship period already in the first academic year (INT ME NL 2). The internship places of students can provide valuable feedback to the study programmes, which makes it important for the academic supervisors to organise getting feedback. This is also stressed by the professional field organisation in the Netherlands; it would like study programmes to invest in the relationship and intensify supervision of students during internships (INT PF ME NL). Moreover, the professional field organisation argues that if the feedback cycle through which study programmes get input from internship hosting organisations is improved, reliance on the professional field advisory board feedback and input mechanism might become less crucial.

The practice of one study programme is to visit the student thrice during their 13-week internship period. During each visit, the supervisors discuss the progress of the student and the desires of the organisation with respect to the study programme. The internship-hosting organisation is also

surveyed, asking the in-company supervisor to reflect on the level of the student (INT EM FL 1). One study programme mentioned that all contacts with the professional field are registered in a central database, e.g. when teachers visit the in-company internship supervisors (INT EM FL 2), to facilitate sharing knowledge about practice within the school.

Another important link with the professional field is facilitated through the teachers of the study programme. When hiring new teachers, study programmes often require work experience. The requirements range from no experience required (INT EM FL 1), through three years of work or research experience (INT ME IE 2), to 3–4 years of work experience and a relevant academic qualification (INT ME IE 1), 5 years of work experience and a relevant academic qualification (INT ME NL 2), 5 years of work experience and a PhD (INT ME DE 2) and finally to 10 years of work experience (INT EM FL 2). The latter study programme has such a high requirement because it has made the teachers responsible for the development of the modules in a way that they fully match the programme's intended learning outcomes. Also the professional field organisation in the Netherlands thinks it is important for teachers to remain active in the professional field (INT PF ME NL).

Study programmes can also assist teachers to connect to the professional field. In one example, an account management model is used, which makes teachers responsible for all contacts with specific companies in the engineering field (INT ME NL 1). In another example, teachers are required to go on internships (see Box 4.2).

Box 4.2: Example teachers' link to the professional field by internships (INT EM FL 2)

It is mandatory for all teachers in the study programme to work 40 days (two months' work) every 5 years for a professional organisation of their choosing. The internship for teachers is to renew their connection to and feeling for the professional field. It is facilitated through inviting engineering companies to the school and explaining them the purpose of the arrangement. Teachers have to report afterwards how the internship linked to the content of the study programme.

Guest lectures are another common practice to create a link with the professional field, especially if the guest lecturers are professionals active in the field (INT ME DE 1). The Irish professional field organisation has dedicated two employees to give guest lectures to engineering students (INT PF ME IE). The guest lectures are about what is expected of engineers, what the profession is about, the code of behaviour and ethics, and the organisation itself. One study programme makes the students themselves responsible for inviting guest lecturers to the school (INT ME NL 2). The students do so as part of their study career development in their first year. Although the guest lectures can offer valuable insights, the experience of one study programmes is that some guest lecturers offer promotional presentations of an organisation, a product, or machinery, rather than providing a valuable contribution to the content of the study programme (INT EM FL 2). This suggests the need for good briefing of guest lecturers.

The link with the professional field and the study programme is also created through company and site visits (INT ME NL 1, INT ME IE 1, INT ME IE 2), teachers doing research in cooperation with industry (INT ME NL 1, INT EM FL 1, INT ME DE 2), and through minors or elective modules (INT ME NL 1, INT ME NL 2, INT ME DE 2). An example of the elective subjects is provided in Box 4.3.

Box 4.3: Links with the professional field through elective modules (INT ME DE 2)

Two modules of the three-year study programme are elective. Students may choose between modules offered by the study programmes, or modules offered by companies that have indicated special needs in terms of skills and knowledge of graduates. Sometimes companies are paid to provide the module. Siemens is one of the companies that provide elective modules.

4.1.1.2 Links with the professional field in examination

Most engineering study programmes desire the professional field to have a role in examination or assessment of the parts of education that link with the professional field. The parts are mainly centred on the links that lead to tangible products, such as project work and theses written during internships.

Project work is often evaluated by a jury consisting of teachers and representatives of the company at which the project was done. The professional field can either have a direct say in the final grade (INT EM FL 2) or be asked for advice (INT ME NL 1, INT ME NL 2). As described in Box 4.4 the professional field can also have a ceremonial role beyond its regular involvement in assessment.

Box 4.4: Role of the professional field in the examination of project work (INT ME IE 1)

In the second academic year, the students make a wind turbine. A local company in the wind turbine industry is asked to judge the students projects in cooperation with a lecturer. The company representative grants an award to the group of students with the best result.

The professional field has an active role during and after the internship period. All study programmes that have included an internship period in their curriculum asked the internship organisation to provide an in-company supervisor. The in-company supervisor is normally part of the jury that assesses the thesis resulting from the internship. The study programmes have different compositions of the juries:

- One jury consists of the in-company supervisor, the internal (academic) supervisor, and a representative of the professional field advisory board of the study programme. The external supervisors provide their insights, which are weighted by the internal supervisor. The final assessment is done by the internal supervisor (INT ME NL 1).
- In another jury, the in-company supervisor of final-year interns is present at the colloquium. Present at the colloquium are also external professionals, who are not from the same company as where the student did the internship. Hence, represented at the colloquium are: the chairman from the faculty, the academic supervisor, the in-company supervisor, and an external member. The academic supervisors determine the grade, but on advice from the in-company supervisor and the extern. Currently implemented is a second academic examiner, who could for example come from a different institution or from the professional field (INT ME NL 2).
- Third example: internship products (theses) are judged by a jury consisting of the hosting organisation, another company, and an academic (INT EM FL 1).
- Final example: internships have two supervisors, a teacher and an in-company supervisor. The supervisor from industry knows about the project the students is working on and is the specialist. Both supervisors meet and discuss the progress and also the final grade. After finishing the thesis there is a colloquium, where the supervisor from industry is also present (INT ME DE 1).

4.1.1.3 Other methods and tools that link study programmes to the professional field

In addition to the direct links, the study programmes have included other methods and tools that link study programme to the professional field in terms of employability. Common methods and tools include the development of soft skills (communication and presentation skills, teamwork skills, reporting skills, language skills, research skills, and job interview training), extracurricular activities, network events, job fairs, and career days. Several initiatives by the study programmes stand out in terms of their potential effect on the employability of students:

- Development of entrepreneurial skills through the Engineers' Office, in which students work in the second year of their studies, and the recently-started facilitation of start-up companies; the first group of student started a company that develops 3D-printed bicycles (INT ME NL 1).
- Mechanical engineering students with above-average grades can enrol in the institution's honours programme. This multidisciplinary programme has the form of an extracurricular activity, in which talented students from different fields of study work together on socially relevant topics (INT ME NL 1).
- Instead of the standard internship, a select number of students are allowed to do a small business project in which the students completely independently develop their own product, meaning that they also need to take care of administration and accounting. Students themselves need to come with a proposal for a product. Some products from these projects actually proved to be of interest to industry (INT EM FL 1).
- Beyond the standard curriculum, students may attain additional certificates for certain specialisations, e.g. energy control and safety control (INT EM FL 1).
- The study programmes organises a job fair each year in March. All companies can come to the fair. To enable employers to contact the graduates, a book with the contact details of the graduates will be made available in advance of the fair (INT EM FL 1).
- Job interview training organised by an employment agency or secondment company (INT ME NL 2, INT ME DE 1).
- A focus on life-long learning attitudes (INT EM FL 2, INT ME IE 1).

4.1.1.4 Employability of international students

All eight interviewed engineering programmes have some internationalisation initiatives. The programmes receive exchange students, but not many. Consequently, the programmes do not have special initiatives to enhance the employability of international students. Also the

domain-specific learning outcomes have not been adjusted for international students. However, the Irish professional field organisation states that the domain-specific learning outcomes are based upon international criteria (i.e. the Washington–Sydney Accord), which makes them also relevant to international students.

Some study programmes have initiatives that provide both international and domestic students with an international experience. Noteworthy are:

- Double-degree tracks with foreign higher education institutions, teachers can receive a scholarship to teach abroad for a number of weeks, and study visits abroad, e.g. to China to work on projects together with Chinese students (INT ME NL 1).
- International exchange students participating in minor modules and projects, in which the foreign students work together with the domestic students (INT ME NL 1, INT ME NL 2, INT EM FL 2).
- Possibility to do internships abroad and possibility for international students to do an internship through the study programme (INT ME NL 1, INT ME NL 2, INT EM FL 1, INT EM FL 2, INT ME DE 2).
- Lecturers take French-language courses to enable them to communicate better with incoming French exchange students (INT ME IE 1).
- International students who do not yet qualify for enrolment may take a foundation year in which they learn English as a second language, cultural attributes, and an introduction to engineering (INT ME IE 1).

4.1.1.5 Learning outcomes desired by employers

By and large, the interviewed study programmes think that the learning outcomes desired by the employers in the field of engineering are reflected in their curricula. The Irish professional field organisation agrees; the programmes have based on input from the industry incorporated the right learning outcomes. Some study programmes explicitly say that this is because the desired learning outcomes are asked (input phase) and incorporated (process phase) (INT ME NL 1, INT EM FL 2, INT ME IE 1). On the other hand, some study programmes indicate that the satisfaction of employers depends on the inclusion of learning outcomes that are specific to their business (INT ME NL 2); not all learning outcomes can be included as the study programmes has to be general (INT ME DE 1). Both interviewed professional field organisations stressed the importance of giving students a life-long learning attitude. In addition, the Dutch professional field organisation insisted on the inclusion of research skills.

4.1.1.6 Recognised good practices

The study programmes and the professional field organisations were asked to reflect on good practices. The notable good practices mentioned by the interviewed study programmes are the following:

- The study programme asks the professional field for additional investments because of the internship periods and the projects facilitated by them. The reasoning is that the additional investment by the professional field results in a win-win-win situation: organisations in the field get in touch with students and potential talent in an early stage of their studies; the study programmes gets its external focus and increased contact with the field that can be used to, for example, organise guest lectures; and students are extra motivated because their assignments are real-life cases. Consequently, the study programmes established a community of professional organisations, students and teachers (INT ME NL 1).
- The study programme makes its own course content. The content is not based on fixed manuals as some other study programmes do. The study programme thinks it is its responsibility to translate the professional learning outcomes to its modules. The translation is done to tailor the curriculum for the students of the study programme with their specific backgrounds. In order to do so, modules are always developed by the teachers themselves. The development of the module content by the study programme itself makes it unique (INT EM FL 2).
- Together with the Faculty of Economics, the Faculty of Engineering initiated an education model that combines study with work. Companies select students that they want to follow the education programme. Students are hired by the companies as apprentices and receive formal education from the institution. Students study four days in the week and work one. Both large and smaller organisations participate in the education model (INT ME DE 1).
- Of the students that the engineering department admits, 60% come from industry. These students are very aware of the skill gaps in industry. The large group of students from industry also provides connections to the industry. The institution can admit these students by recognition of prior learning, which allows the students to be enrolled in the level 7 or 8 programmes, without them having a level 6 or 7 qualification. Applicants are interviewed and have to submit a portfolio. Based on this, the study programmes decides if they are eligible for a particular level. When applicants do not have the right level, they can be suggested to follow programmes on a lower level or they are offered bridging modules, e.g. in mathematics (INT ME IE 1).

› Many colleges have multidisciplinary projects in the third or fourth year with students from other departments (e.g. marketing or business administration) (INT PF ME IR). Students who worked in a multidisciplinary are much more rounded and more employable as they know where everyone's expertise fits in (INT PF ME IR).

4.1.2 / Practices in the field of social work/care

4.1.2.1 Link with the professional field in teaching and learning

All interviewed social work/care study programmes created links with the professional field through the inclusion of internships and through teachers with professional experience. Examples of both practices are provided in Box 4.5.

Box 4.5: Examples of internship and teachers with professional experience practices

Internships

SW NL 1: Internship periods in all four years. In the *first year* students go on an orientation internship of 200 hours. Depending on the specialisation, students go in their *second year* on a part-time internship for 15 weeks (three days per week). A long internship takes up all of the *third year*, when students are expected to become independent professionals. In the *fourth year* internship students are expected to do a project for a professional field organisation.

SW FL 1: The study programme has *two internship periods*. One of 40 days and one of 70 days. Students write their bachelor's thesis in the 70 days' internship. Before starting a 70 days' internship, the student and an internal supervisor discuss the learning objectives and agree a project plan, also with the external supervisor. The learning objectives are based on the attained results of the 40 days' internship. Students perform a self-evaluation during and after the internship, which is discussed with both supervisors.

SW FL 2: The study programme has internship periods in the *second* (seven weeks) and *third* year (13 weeks or full semester). In-company supervisors are preferably graduates of a social work programme themselves, because they understand the competences that students need to learn. There is a *brochure* for internship-hosting organisations, describing, for example, the competence profile, the expectations of supervisors, and possible assignments. Internship-hosting organisations can submit internship vacancies on an *online platform*, where students can make their profile and select the internships in which they are interested. Based on the preferences, the students will have a meeting with the internship coordinator. After approval, the students can apply for the vacancy.

SW FL 2: The study programmes competes for internship places with another social work study programme in the same region. The study programme says that the competition for internship places keeps the study programme 'sharp', as the places need to be of good quality for the student and also be of added value to the hosting organisation. Therefore, the study programme focusses on:

› Preparing the students for the internship.
› Good supervision and guidance of the students.
› Communication with the hosting organisation.
› Making sure that the bachelor theses are of good quality and have added value.

Teachers with professional experience

SW NL 1: Teachers who are involved and active in the field give students practical examples. This factor has contributed to the growth of the study from 800 to 1,300 students. A benefit of this growth is that more new teachers can be hired.

SW NL 2: The teaching staff of the study programme often simultaneously work in the professional field. Possession of relevant practical experience is a requirement for the teaching staff. Also encouraged is teachers' involvement within social consultation structures and doing voluntary work.

SW FL 2: The study programme has many teachers who have work experience. Work experience is a factor in determining salary. Minimum for hiring is five years of work experience, more is preferred. The institution itself develops didactical skills, with help of its own experts.

Guest lectures also play a prominent part in most interviewed social work/care study programmes.

- SC IE 2: The study programme invites professionals to give guest lectures on the work they do, in different modules throughout the curriculum. Many professional see it as a way of promoting their organisation and as a possibility to get students interested in doing an internship with them.
- SW NL 2: Speakers come from the professional field, but also politicians are invited. Local aldermen are particularly of relevance because they are close to social work target groups as well as to social work organisations.

The professional field organisation in the Netherlands has several *memoranda of understanding* with study programmes through which it provides guest lectures (INT PF SW NL).

The practical orientation of social work/care programmes might suggest that the programmes have little attention for research. However, the opposite appears to be true:

- SW NL 1: All teachers are involved in the programme's research department, as well as in the bachelor and master programmes. The involvement of teachers in all these different aspects has led to new teaching cases and to new connections with the field. Students are also involved in research.
- SW NL 2: The study programme implemented practically-oriented research in which the professional field is involved. An organisation from the field formulates an assignment, which a student or a group of students work on as if they were advisors of the organisation. The supervisor from the organisation is also involved in the assessment.

As the previous example shows, the links between practice, research and education can be very direct. Real-life research projects or assignments are used in education more widely, e.g.:

- INT SW FL 1: Every year, organisations are asked to supply an assignment that contains learning elements for students. These projects also lead to good relationships with the professional field.
- INT SW DE 1: In the last semester of the study programme, students work on a research question given by organisations from the field. The results of the research are communicated back to the organisation.

The professional field organisation in the Netherlands indicated that research skills are important in the study programmes (INT PF SW NL). However, according to the professional field organisation, in work practice social workers find it difficult to actually use their research skills (INT PF SW NL). Moreover, research by students seems to replace research by (graduated) social workers.

A Dutch study programme (SW NL 2) says it will more extensively use problem-based learning (PBL) as a teaching and learning method in future. However, the programme realises that PBL may lead to students being too focused on the problems and too little on the required knowledge. For the latter reason the other Dutch study programme (SW NL 1) decided to reduce its use of PBL.

Only one study programme (SC IE 2) mentioned connections to the profession through field trips, and even this programme used field trips rarely. Maybe this is the counterbalance to the programmes' having multiple and in some cases lengthy internship periods.

With respect to the inclusion of the professional field in education one study programme (SW FL 1) commented that it is a challenge to balance educational logics and professional field logics, and that this balance needs continuous evaluation. Another programme (SW DE 1) experienced some tension with employers about the right balance between general and specialised knowledge. Employers want someone ready for immediate work, whilst the programme wants to educate students with a long-term perspective.

4.1.2.2 Link with the professional field in examination

Most interviewed study programmes give the internship-hosting organisation a role in grading internship outcomes. In the Netherlands and Germany (INT SW NL 1, INT SW NL 2, INT SW DE 1) the in-company supervisors provide input for the assessment, while the actual assessment remains the responsibly of the academic supervisor. The practice of one Irish study programme (SC IE 1) is that after an internship, the in-company supervisor reports whether the student has reached a satisfactory level. The practice of the involvement of one Flemish study programme (SW FL 1) stands out as the most elaborate (Box 4.6).

Box 4.6: Inclusion of the professional field in the bachelor thesis and its assessment (INT SW FL 1)

During the final internship students write their bachelor thesis. Before starting the internship, the student and an internal supervisor discuss the learning objectives and come to a project plan. The project plan must be approved by the student as well as by the internal and external supervisors. The student makes a self-evaluation during and after the internship, which is discussed with both supervisors.

An external jury panel assesses the thesis. The external supervisor of the bachelor thesis is not part of the jury, but provides input on the evaluation of the intern.

Examination of the whole programme by external examiners is common practice in Ireland (INT SC IE 2). The external examiners, one of whom is a professional from the field, look into the achieved exams and provide the programme with feedback. Another practice concerns involving the professional field in a specific part of the study programme (Box 4.7).

Box 4.7: Involving the professional field in a specific part of the study programme (INT SW NL 1)

After the first semester, the programme (SW NL 1) organises a three-hour assessment with each of its around 300 first-year students. All have to prepare and hold meetings with fictitious clients, during which a teacher and a professional from the professional field assess them.

The assessment gives students an experience of being a social worker, and it also indicates to the programme the students' suitability to become social workers. The assessment is not meant as a selection mechanism of the study programme, but is rather seen as a development tool for the student. Based on the assessment, students are encouraged to reflect on their study choice. The assessment was developed nationally. A disadvantage of such an assessment is its high cost.

4.1.2.3 Other methods and tools that link study programmes to the professional field

Soft or generic skills are important to employers (INT SW NL 1, INT SW FL 2). Therefore, many soft skills are included in curricula, e.g. writing, presenting, interviewing, listening, telephone conversation, and research skills. Less common is the inclusion of language and entrepreneurial skills. Programmes also give attention to development of appropriate attitudes, such as flexibility and engagement. Finally, there are skills students need to find work after graduation (Box 4.8).

Box 4.8: Practices that enable students to can find work after graduation

SW FL 1: Students may take part in (non-credit bearing) interview trainings and in job/further education fairs. The interview training is provided by an employment agency, such as *Randstad*. Moreover, labour market perspectives are discussed with final year students.

SW DE 1 offers career counselling, through which students learn how to choose a job and how they could present themselves to employers. In addition, good students can be recruited to trainee programmes with selected employers.

SC IE 2 has two modules on personal professional development. In one of them students develop their career planning for a period of five years. Students also receive support from different services of the institution, e.g. students can have their CVs reviewed or take job interview training.

Organising events can also be a method with which study programmes create links to the professional field. At such events students can meet the professional field, and vice versa. Examples of events include:

- SW NL 1: Study days for teachers, the professional field and alumni.
- SW NL 2, SW FL 2: Alumni activities.
- SW FL 1: Debates between students and professional field.
- SW DE 1: Every autumn there is an event in social science faculty at which interested employers (last year more than 120) present themselves to students. In addition, the alumni association organises events, such as parties but also scientific presentations. Despite having an alumni

association, the study programme loses contact with most graduates.
- SC IE 1: Sometimes employers are involved in seminars and symposia.
- SC IE 2: Once a month, alumni may come back and facilitate a reading, or discuss an issue, with the teaching staff. The communication gives insights into which aspects alumni feel were or were not adequately addressed in the study programmes. Hence, their input is used to improve the study programme.

4.1.2.4 Employability of international students

Internationalisation appears to be an increasingly important aspect of social work/care programmes. All programmes support students to study part of their programme abroad, but the eagerness amongst social work/care students for mobility varies heavily; none to very few of the Irish students go abroad for some time, 10% of the students of a German programme (SW DE 2), and 20–25% of Dutch students. The low willingness of Irish social care students to study abroad is interesting because many go to work abroad after graduation (see Section 5.2.2). To internationalise the programme, study programmes facilitate Erasmus exchanges of students and teachers or they cooperate with foreign social work programmes.

Most interviewed programmes receive a small number of international students through Erasmus. At one Dutch study programme (SW NL 1) Erasmus students follow modules in the fourth year of the programme, which are in English, for a period of three to six months. At this programme, international students do not go on internship in the Netherlands, but the programme organises field visits to give international students a feel for the Dutch context. Both Flemish study programmes facilitate international social work students for internships in Flanders. Moreover, at one programme (SW FL 1) international students can follow an introductory module in social work. Exchange students at one Irish study programme (SC IE 2) follow one semester in the third year of the programme, after which they can also do an internship in Ireland.

Besides the practices described above, the interviewed study programmes do not have special initiatives that enhance the employability of international students. In particular, the programmes have not determined specific learning outcomes for international students. International students mostly follow part of the programme together with local students, and are thus exposed to the employability-enhancing aspects that are also available to local students (e.g. the development of soft skills).

4.1.2.5 Learning outcomes desired by employers

By and large the study programmes think they have included the learning outcomes desired by the employers. The programmes that have mentioned so, base their claim on:

- SW NL 2: Contacts with the professional field resulted in establishing certain specialisations.
- SW FL 1: Research among employers shows that the desired outcomes are largely included in the study programme. For example, this research suggested not including social media aspects in the curriculum.
- SC IE 2: Links with employers are established through networking, e.g. through contacts that supervisors have with internship-hosting organisations.

As mentioned earlier, finding a balance between what employers demand and what the programme thinks should be included can be a challenge. For instance, although specialisation might make graduates more directly employable, giving them a strong foundation in general knowledge is also a key task of study programmes (INT SW NL 1, INT SW DE 1). In a Flemish study programme (SW FL 1), a more generic orientation led to it having 103 generic ECTS and 77 specialised ECTS. The study programme realises that the generic orientation might affect employability negatively, and to compensate, the programme teaches students the importance of life-long learning, as well as the required knowledge and skills to become life-long learners.

4.1.2.6 Recognised good practices

The interviewed study programmes in Ireland, the Netherlands and Germany mentioned that the cooperation they have with other social work programmes could be considered a good practice.

In Ireland, the Irish association of social care educators hosts meetings where all Institutes of Technology with social care programmes discuss common approaches with regards to practice learning, internships, and teaching areas. Through this platform some of the areas to improve the quality and to find good practices have been standardised (INT SC IE 1).

The programmatic review panels for the social care programmes in Ireland have members from different IoTs, which creates an opportunity to network among one another (INT SC IE 2).

In the Netherlands the social work programmes have defined the learning outcomes together. Every six weeks the programmes meet in the national consultation structure (INT SW NL 1). Based on this platform, recently some social work

programme started assessing each other's theses. Furthermore, one of the interviewed programmes offers an associate degree together with another social work programme (INT SW NL 1).

In Germany the social work programmes jointly recommended 100-day internships for all social work programmes (INT SW DE 1). The recommendation emanated from the national consultation structure of social work teachers. Moreover, a German study programme developed a part-time social work programme together with another programme (INT SW DE 2). The other German social work programme (SW DE 1) offers a specialisation module jointly with a foreign institution. In this module students can go on exchange. During the exchange students are shown typical work places of social work. Noteworthy is also the cooperation the study programme has with the architecture programme within the same institution.[13]

Between 2009 and 2011, the Flemish social work programmes cooperated to come to domain-specific learning outcomes. Subsequently, the cooperation between the programmes appeared to have ended. However, recently there have been some initiatives for voluntary peer review of teaching practices among a selection of social work programmes (INT SW FL 2).

4.1.3 / Practices in the field of tourism

4.1.3.1 Link with the professional field in teaching and learning

Internships, guest lectures and project-based learning are the three most commonly utilised methods with which the tourism study programmes link their programmes to the professional field. Also important for the link to the professional field are teachers with professional experience, and field trips. Good practices on these methods are described in Box 4.9.

Box 4.9: Good practices to link the professional field to teaching and learning in tourism

Relevant bachelor thesis topics: The professional field is asked to provide problems, which the students can work on in their theses. If starting from own initiative, students must ask at least two tourism employers for feedback on and input for their topic to ensure that the topic is of relevance and has added value (INT TO FL 1).

Guest lectures: Guest lecturers are invited to talk about their expertise or about 'the person behind the company' (INT TO DE 1). Guest lectures come in addition to the normal lectures, but there are also guest lecturers who provide entire modules as electives in the curriculum (INT TO FL 1). Guest lecturers are sought for their specific expertise, especially if permanent staff do not have the required expertise (e.g. in mobile applications) (INT TO FL 1). The Dutch professional field organisation brokers guest lectures by hosting a platform through which study programmes can get in touch with employers, and also provides guest lecturers from its own organisation (INT PF TO NL).

Project-based learning: In a project that spans two semesters, a group of 4-5 students are paired with a real life case. The students meet the management of the company. At the end of the second semester the group presents its work to the company, fellow-students and teachers (INT TO IE 1).

In the last year, students do small business projects. The projects are multi-disciplinary. For their project, students need to find a 'dream coach'; an inspiring entrepreneur who provides feedback (INT TO FL 1).

Teachers gain professional experience: More academically-oriented teachers can do internships in the professional field, through tailor-made agreements. Moreover, teachers can go on exchanges to cooperating institutions (INT TO NL 1).

Although there is no formal requirement for teachers to remain in contact with the professional field, they are stimulated to do so, to enhance teaching quality. Relations with industry can result in cooperation and research projects, for which staff are rewarded through, for example, teaching reduction (INT TO DE 1).

13 Students from both programmes work together to design infrastructures and buildings in such a way that they contribute to crime reduction.

For the project-based learning component the Flemish professional field organisation supplied cases (INT PF TO FL). Although the organisation indicated projects could return useful information to employers, results varied and both study programmes and employers need to be aware of that (INT PF TO FL).

With respect to internships, three interesting practices can be highlighted:

- TO FL 2 indicated that there are more internship places available in the country than it can service, because an increasing number of students do their internships abroad. Therefore, one third of the students are required to do the internship in the country and at different companies, to satisfy as many employers as possible.
- TO DE 1 also evaluates the internship provider. If the offered work place is not appropriate for internships, the internship providers could be removed from the internship providers' database.
- TO IE 1 has two internship periods; one is introductory and takes place in the summer after the first year (15 weeks), the second is the third year placement of six months. The study programme insists on the students getting remunerated for the latter. Its view is that the students are quite work-prepared and that employers should reward this.

In addition to the common methods, there are also a number of specific initiatives. These are related to:

- In-house training: learning enterprises of the study programme (INT TO NL 1), internal internships (see Box 4.10; INT TO NL 2), and an online travel portal (see Box 4.10; INT TO DE 1).
- Debate evenings: professionals, staff, students and alumni are invited to the debate evenings to discuss relevant trends and developments in the sector (e.g. social media usage in tourism sector). These events also offer networking opportunities (INT TO FL 2).
- Sales pitches to the professional field: students present their products/innovations to the professional field (INT TO NL 2).

Box 4.10: Two good practices of in-house training in tourism

Internal internships: for the hospitality performance competence students practise in their first year in 'safe' environments within the institution. For example, by organising and hosting graduation ceremonies (INT TO NL 2).

Online travel portal: the study programme together with an association of online travel companies is developing their own travel portal. Students will be active on the operational and strategic level and will be responsible for all the issues of running the electronic market place. The association supports the pedagogical method and provides assistance to the students (INT TO DE 1).

As was described in § 3.3.3, it is vital for tourism study programmes to maintain high awareness of the trends in the sector. Insight into the trends and developments is used as input for the design of the study programme and consequently finds its way into the curriculum. Perhaps best are the tourism study programmes that succeed in including trends the fastest (INT PF TO NL). Practices of how the study programmes do so are described in Box 4.11.

Box 4.11: Practices with which tourism study programmes include trends and development in their programmes

Through its **contacts with the sector** and by having **many alumni employed within the sector**, the study programme is outstandingly aware of trends and developments in the sector (TO NL 1 mentioned in INT PF TO NL).

The study programme uses current issues of the market as the point of departure for **education and research**. Goal is to make students research issues that 'keep entrepreneurs awake at night'. Business representatives present to students their organisation's or sector's issues. Students develop and present to the representative their solutions. This enhances employability of the students, as it gives the students from their first day on practical insight (TO NL 2).

The tourism sector changes dramatically. Therefore, **students review weekly travel sections of newspapers** and search articles on particular topics, to replace out-dated examples from academic textbooks (TO IE 2).

Once the programme's curriculum has been approved, the study programme has to keep to the developed criteria for six years. However, **10% of the curriculum is flexible** so that emerging trends can be included in the curriculum (TO IE 2).

The study programme realised in time that the strong focus it used to have on travel organisation was getting out-dated. Consequently, the curriculum was broadened by including **elective modules** to give the programme flexibility to respond to trends (TO FL 2).

Based on teachers' involvement in tourism bodies and on student evaluations, **the content of modules changes every year** to co-opt trends in the sector (TO FL 2).

4.1.3.2 Link with the professional field in examination

The professional field is involved in the evaluation and examination of three aspects of the study programmes: projects, internships, and graduations. Especially projects that are provided by the professional field are evaluated in most cases with help of the cooperating organisations.

Internship-hosting organisations play an important part in the evaluation of internship periods. For instance, during internships, students' log book entries are discussed with the supervisor of the company and used for the assessment of the students (INT TO IE 1).

There are also practices in which other professionals from the field are involved in the graduation (Box 4.12). With respect to the evaluation of bachelor theses, an interesting practice is that of the four Dutch tourism study programmes, which evaluate the graduation theses of each other's students.

Box 4.12: Two practices in which professionals from the field are involved in the graduation examination

TO NL 1: For the graduation of students there are *three examiners*, who have an equal say in the final grade. The examiners are: the chairperson, the supervisor from the study programme and an extern from the professional field. Externs are required to have an academic qualification, to be employment in the professional field, and not to be older than 65.
For supervisors and externs there is a regular event in which the director of the academy presents the developments of the institution and its environment. The event also has workshops on sharing knowledge, examination, and assessing objectively.

TO FL 2: To graduate students do a *graduation group project*, which entails a *simulated tourist company*. A jury consisting of an academic, someone from the sector, and someone from the finance industry examine the groups. The group with the best project win flight tickets, sponsored by an airline.

In Ireland it is common to have external examiners, who evaluate the entire study programme. The examiner needs to possess academic and business excellence (INT TO IE 1). The examiners can be required to approve exams (INT TO IE 2), review papers written by students and review grades given to students (INT TO IE 1). The external examiners judge if examinations are of the appropriate academic level, on the right subject, and focussed on the right areas (INT TO IE 1).

4.1.3.3 Other methods and tools that link study programme to the professional field

Tourism study programmes apply additional methods and tools to enhance employability of the students. Most common is development of soft skills, especially communication (writing and presenting) and language skills. Other commonly mentioned soft skills include: entrepreneurial skills, networking skills, negotiations skills, and team work skills. The soft skills are developed throughout the curricula of the tourism study programmes.

All tourism study programmes include modules in which students are prepared for future job search. Noteworthy examples include:

- Job or career fairs (TO FL 1, TO FL 2, TO DE 2, TO IE 1, TO IE 2). Third year students are required to attend the fair and are to do at least two trial job interviews, about which they get feedback (TO FL 1).
- Career service office or centre (TO DE 1, TO DE 2), which provides voluntary job interview training and helps student write application letters (TO DE 2).
- To encourage the best students, the study programme together with a professional field representative body provides additional supervision and scholarships. Moreover, traineeship positions in the largest tourism companies are offered (TO NL 1).
- Specific methods: attention for the professionalization of the student's LinkedIn profiles (TO NL 2), job vacancy analyses to show the diversity of the sector and how it matches with the students' personalities and profiles, and writing application letters in a foreign language (TO FL 1).
- In terms of career development, employers are invited to share their expectations (TO DE 1).
- In their second semester, students are invited to meet young HR professionals from the sector. Students bring their CV and do a trial interview (TO IE 1).

There are also events, other than job fairs, which have an impact on the employability of the students. Examples include:

- Networking events for students, for example, during their internships ('return to the institution' days), regular events for supervisors and external examiners, and talks between the professional field advisory board and the students (TO NL 1).
- Current students are invited to alumni events so they can network with alumni (TO NL 2; TO DE 2).

Two related initiatives need mentioning. First, one study programme (INT TO NL 2) made teachers *account managers* to remain in contact with the most important partners. Those teachers may spend up to 15% of their account managing time to engage with new markets and emerging actors. Second, one institution appointed *placement managers*, who are teachers rather than administrative staff (INT TO IE 2). The placement managers also coordinate the internships. The relationships between the placement managers and business are very close and protected carefully. The businesses that the institution has in its placement list are seen as an asset.

4.1.3.4 Employability of international students

All interviewed tourism study programmes have international students. In addition to exchange students, the majority of the study programmes have international degree-seeking students (except the two Flemish programmes). With one exception, the study programmes report that there are no specific initiatives to enhance the employability of international students. The exception concerns an institution-wide initiative to support international students to find employment in the Netherlands (INT TO NL 2). The other Dutch study programme mentioned legal barriers and simply fewer job opportunities for English-language students as barriers to recruiting international students (INT TO NL 1).

Across the board the expected domain-specific learning outcomes for international students are the same as those for domestic students. The Dutch professional field organisation that was involved in establishing the domain-specific learning outcomes, provided input with its own member organisations in mind, i.e. Dutch employers. Therefore, the professional field organisation is not primarily concerned with learning outcomes relevant to foreign employers (INT PF TO NL).

4.1.3.5 Learning outcomes desired by employers

The interviewed tourism study programmes feel certain that they have included the learning outcomes desired by employers. The interviewed professional field organisations agree, but together with the study programmes express some reservations, due to the highly dynamic nature and breadth of the sector. For example the decline of tour operators and the increased importance e-commerce suggests that tourism students should learn different skills, such as software engineering (INT TO FL 1). Moreover, employers in the tourist sector increasingly ask for a bachelor qualification, not necessary a tourism bachelor (INT TO FL 1), implying an increased focus on general skills vis-à-vis tourism specific skills.

Given the above described context, tourism study programmes appear to follow three, non-exclusive, approaches:

1. Focus on general and soft skills.
2. Increased specialisation including new developments in the tourism sector.
3. Increased academic orientation and involvement in (fundamental) research.

The first approach teaches students learning outcomes that have a longer life span than just the current learning outcomes desired by the professional field (INT TO NL 1). Inclusion of more general and soft skills also enhances the employability of students in other sectors (INT TO FL 1).

Through the second approach study programmes adapt to current trends in the tourism sector. Nevertheless, as one respondent pointed out, study programmes risk running continuously behind: by the time students with new learning outcomes have graduated, those learning outcomes may have lost their relevance (INT TO NL 2). A common method that tourism study programmes use to increase specialisation yet remain up-to-date is through elective modules. However, especially language modules are offered as electives; e.g. in addition to the mandatory French and English modules, electives may include German, Spanish or Chinese (INT TO FL 2). Besides, there is a limit to the number of specialisations a study programme can offer; some programmes are simply too small to include specialisation tracks for every desired learning outcome (INT TO FL 1). Inclusion of the dynamics in the desired learning outcomes is also achieved through annual adjustment of module content. All interviewed tourism study programmes do so, which suggests the necessity of frequent curriculum updates in this sector.

The Flemish professional field organisation leaves the choice for a more generic or rather a more specialised profile to the study programmes (INT PF TO FL). However, it finds that in terms of employability from the perspective of employers a generic profile would be preferable; with generic skills students have more opportunities on the labour market as they can also find employment in other sectors, e.g. the financial industry (INT PF TO FL). Furthermore, the professional field organisation said that the tourism sector itself could teach new employees the state of the art of the sector. Therefore, it is more important that the tourism programmes teach students the right attitudes including, flexibility, language skills, and service mindedness.

Regarding the third approach, it appears that the German and Irish tourism study programmes have given their curricula a stronger academic orientation, which for example shows in the opportunity of students to graduate on a fully theoretical thesis. The Dutch study programmes and to a lesser extent the Flemish study programmes also appear to increase the academic orientation of the study programme, by including research skills in the curricula and by doing both fundamental and applied research for the tourism sector. Increased attention for research is also a wish of the professional field (INT PF TO NL, INT PF TO FL). The Dutch professional field organisation has developed a research agenda in consultation with its member organisations (INT PF TO NL). Students can write their bachelor theses on topics included in the research agenda (e.g. holiday perceptions, or HR-issues of the tourism sector). However, in this respect, there can be a tension between the practical focus desired by the internship-hosting organisation and the wish of the study programme to have students write a more theoretically-based thesis (INT TO NL 1).

The larger question for all tourism study programmes is if they can remain relevant to the tourism sector (INT PF TO FL, INT PF TO NL). The challenge for all tourism programmes will be to show their added value to the sector (INT PF TO NL). Firstly, the sector appears to be increasingly satisfied with graduates having general skills, which they can attain by following study programmes other than in tourism (e.g. in business administration). And secondly, the sector also appears to be in need of specialised learning outcomes, such as software engineering, which the tourism study programmes are not very likely to offer. In light of the first development, the question can be asked if the tourism study programmes, in particular the four-year study programmes in the Netherlands, are not specialising the graduates so much that it is makes them less employable.

4.1.3.6 Recognised good practices

The study programmes and the professional field organisations were asked to reflect on best practices. Notable good practices included:

- A study programme (TO NL 1) indicates that the interviewed professional field organisation (PF TO NL) shows good practice by remaining acutely aware of the latest and future developments in the sector (e.g. where will it be ten years from now?). It sets an example for other professional field organisations (INT TO NL 1).
- Being assertive in seeking partnerships with industry requires an entrepreneurial attitude, willingness to invest in contacts and in initiatives. The study programme can be so pro-active because it is relatively autonomous from its mother institution (INT TO NL 1).
- In Germany, private higher education institutions have more flexibility, in comparison with public ones, which makes swifter programme adjustments possible (INT TO DE 1).
- A private programme may focus solely on the number one success factor: employability (INT TO DE 1).
- A Dutch tourism study programme (not in our study) has study facilities abroad, where students *must* study part of their studies. This strong international orientation is seen as a good practice (INT TO NL 1, INT TO NL 2).
- Three of the interviewed tourism study programmes indicated that spending time abroad for study or internship is mandatory (INT TO NL 2, INT TO DE 1, INT TO DE 2).
- The Dutch professional field organisation together with a study programme started a tourism blog that serves as a learning company for students (INT PF TO NL). Blog posts can be based on research by students.

4.2 / Summary and conclusion

Study programmes used a number of common methods to arrange the link with the professional field in the process phase. These methods included: internships, projects or project-based learning, teachers with professional experience, guest lectures, field trips, and elective modules. The professional field was also involved in examination of projects, internships, graduations, role-play assessments, and graduate theses, sometimes even without there being a direct link with the profession representative in the jury.

Through strong linkages with the professional field, many study programmes continuously made curriculum adaptations to include the latest trends of their sector. Inclusion of the latest trends and developments appeared to be especially relevant for study programmes in dynamic sectors, i.e. tourism.

To structure and monitor contacts with the professional field some study programmes developed knowledge management systems, to aid and maintain links to the professional field. Thus, one study programmes indicated registering all contacts with the professional field in a central database and two study programmes mentioned operating an account management system. In the latter case teachers were made responsible for contact with professional field.

Across all domains studied, study programmes taught employability-relevant transferable skills next to field-specific skills. Transferable soft skills included: communication, job attainment training (e.g. interview skills, net-working skills, professionalization of online presence), and language skills (particularly taught by tourism programmes). Some institutions had dedicated centres, outside study programmes, to facilitate students' acquiring job-related skills.

Internationalisation could aid employability of the students, however many study programmes mentioned that that they could give more attention to internationalisation. Initiatives specifically established to enhance the employability of incoming, degree-seeking international students appeared to be largely absent.

Chapter 5

Results of the input of process phases

The research question and sub-questions posed to look into the results of the input and process phases are the following:

Results: what are the results of the 'input' and 'process' in terms of employability?

a. What is the quantitative and qualitative connection of graduates to the labour market?
   - Expressed in terms of employment statistics of the included professions and needed search time between graduation and employment.

b. How do the stakeholders (employers and alumni) judge the connection between the labour market and the professional bachelor's study programme?
   - An important indication of the judgement of the stakeholders can be found in satisfaction studies covering the realised learning outcomes of graduates. Important is to take into account the consequences of the economic crisis in terms of the oversupply in certain professional fields /domains and countries.

The following sections will discuss the empirical data that was collected through interviews for these research questions per field of study. Best practises are recognised and highlighted.

5.1 / The quantitative and qualitative connection of graduates to the labour market

5.1.1 / Practices in the field of mechanical engineering/electro mechanics

5.1.1.1 Results in terms of employability

All interviewed study programmes are very positive about the achieved results in terms of employability. The interviewed professional field organisations seconded this claim. The achieved result is attributed to the content of the study programmes, as the following examples show:

- All graduates find employment, provided they have a positive attitude. Students have been given sufficient opportunities to get in contact with the professional field, and to learn which companies they like (INT ME NL 1).
- Through the practical experiences included throughout the curriculum, students attain experience and build a network, which could be a reason for the positive employment results and also for the satisfaction of students with their attained employability (INT ME NL 2).
- Comparing the alumni survey results before and after introducing the new set of competences, the outcomes show that the graduates made progress on the new competences and became more employable (INT EM FL 1)
- Employability results are good because the programme does not make students too specialised. They can find employment in many different companies (INT ME DE 2).
- A number of graduates became CEO's of large engineering companies or have started their own businesses. Moreover, in terms of graduate employability, the graduates from the study programme are at the leading edge because of the practical orientation of the programme. Of importance here are their learned drawing skills and familiarity with equipment. This is testimony of results of the study programme (INT ME IE 1).

A strong factor is also the general labour market demand for engineers. For instance, for every engineering graduate in the Netherlands there are two job vacancies (INT PF ME NL). Some study programmes indicated that other factors also play a role in the employability of their graduates, such as: the good reputation of the study programme among employers in the field (INT ME NL 1) and graduates that do not start their career in engineering, but in different sectors (INT ME NL 2).

The question whether the study programme achieves a better graduate employability in comparison to similar study programmes yields several different responses. Firstly, there are study programmes that think their results are better:

- Graduates from the study programme are often considered to be much stronger than those from other programmes in the ability to use the equipment and technology they encounter in industry (INT ME IE 1).
- Some employers prefer the study programme's graduates over graduates from other colleges who went on work placement, suggesting that the project work done in the study programme can be of equal or of even better value to the employability (INT ME IE 2)

Secondly, there are the study programmes that argue that the employability results are comparable (INT ME NL 2). More specifically, one study programme argues that in the current positive labour market situation, anyone with a bit of technical schooling is likely to find employment (INT EM FL 2).

Lastly, one study programme said that the employment opportunities very much depend on the region. The study programme is lucky to be in a region with many employers in the field of engineering that are often traditional family companies that are less active the international market, but rather focus on the regional market. Institutions founded in regions with increasingly fewer employers in the field of engineering, currently struggle to find employers for their graduates (INT ME DE 1).

5.1.1.2 Monitoring employability

As can be deduced from the employability results discussion, all study programmes report that most if not all students find employment after graduation. Statistics from the study programmes show amongst other things:

- Within three months, 97% of graduates found employment. Nearly half (47%) of the graduates found employment in a 20 km radius from the location of the institution, which shows the high demand for graduates in the region (INT EM FL 1).
- Within three months after graduation all graduates (100%) found employment (INT EM FL 2).
- In less than two months after graduation, 80% of the students found employment. To do so, 50% of the graduates wrote 0 to 3 application letters, and 75% needed less than 10 application letters (INT ME DE 2).

Almost all study programmes report that many graduates find employment at the company where they did their (final) internship. Students also look for companies offering internships where they would also like to be employed after graduation and half of the students can stay at the company where they do the internships (INT ME DE 1).

Some graduates continue their education on master's level within the institution (INT ME IE 2) or at a different (research intensive) higher education institution (INT ME NL 2). In the latter case, some graduates continue their education in a different field, e.g. business administration. Another study programme notices that very few graduates follow additional education after graduating, which they interpret as a sign on the high employability of the graduates (INT EM FL 1).

The interviewed study programmes have different strategies to monitor the employability of the students and, later, alumni. Employability of students is monitored through the attainment of the intended learning outcomes and is evaluated in the examinations (INT ME NL 2), by student satisfaction surveys (INT ME NL 1), and module evaluations (INT ME DE 1).

Monitoring of the employability results of alumni also can be done through a national survey, as is the case in the Netherlands (HBO-Monitor), by a survey organised by the institution (INT EM FL 1, INT ME IE 1, INT ME IE 2), or by the study programme (INT EM FL 2, INT ME DE 2) or the faculty (INT ME DE 1). Both Dutch mechanical engineering study programmes judge the national survey to be sufficient and they do not organise additional surveys. Nevertheless, a survey could be done if signals are received that the study programme is off track (INT ME NL 1). The two Irish institutions have career offices that organise graduate destination surveys. The statistics are, however, collected on an aggregated level, which means that programme-specific statistics are not available. The employability monitoring practice of one of the Irish institutions is described in Box 5.1. The surveys held by the Flemish institution are part of the institution-wide internal quality assurance cycle (INT EM FL 1), which surveys graduates and employers, alternating every two years. The graduate survey covers aspects such as: which company, how many employees, currently employed, looking for other job, additional qualifications, position, full-time or part-time contract, salary, responsibilities, relevant diploma's for the position, time to find a job, and relevant competencies. The practice of how the other Flemish study programme itself monitors employability is described in Box 5.2.

Box 5.1: The employability monitoring practice of an Irish institution (INT ME IE 2)

On graduation day, all graduates fill out the graduate destination survey. Employed graduates are asked to supply information on: title of job, name of company, nature of business, starting salary, and how they obtained the position. Graduates who continue their education are asked for: name of new programme, its duration, and institution. The graduates who choose not to continue their education at the ME IE2's institution are asked for reasons to continue studying elsewhere.

The information is used to update the institution's list of employers. Newly added employers are contacted for giving a presentation to current students about job opportunities at the employer. The analysed results are provided to the management of the schools and departments. Important outcomes affecting the continued development of the programme can be addressed in the Programme Board Annual Monitoring Report.

Box 5.2: The employability monitoring practice of a Flemish institution (INT EM FL 2)

Annually, the study programme asks alumni to fill out a survey three months after they have graduated. The survey is held at the occasion of students receiving their diploma, resulting in a 100% response rate. The survey contains questions on: current employment, further education, attained learning outcomes, satisfaction with the study programme, and current contact details.

Every third year a survey is held among alumni who graduated 3 to 5 years ago to see how they have developed, in the sense of: growth opportunities (financial and professional level), further education, and reflection on study programme (was the programme sufficient?).

Alternatively or sometimes in addition to having a continuous evaluation cycle through surveys, some study programmes utilise other methods through which employability is monitored. These include:

- How easy or difficult it is for a student to acquire an internship position (INT ME NL 1).
- Informal contacts to find out where graduates have found employment. The study programme is considering utilizing social media (LinkedIn) to connect to graduates. Based on the LinkedIn profiles it would be easy to analyse where they found employment (INT ME IE 1).

5.1.1.3 Accountability for graduate employability

The engineering study programmes conclude that they are for a large part responsible and accountable for the employability of their graduates. With respect to the accountability the study programmes say:

- The study programme is largely responsible for employability: the programme offers knowledge and skills, and there is a strong link with the professional field. Both aspects provide the highest changes for students to find employment (INT ME NL 1).
- The study programme is fully responsible for employability. Study programmes must include the learning outcomes that are requested by the professional field (INT ME NL 2). Adapting in this way signals that the study programmes has the highest regard for the employability of the graduates (INT EM FL 2). The study programme is only successful if its graduates find employment in the field of study (INT EM FL 2). The study programme is responsible for maintaining connections with local industry (INT ME DE 1). The institutions would be shutting down study programmes if they would not deliver what industry wants (INT ME IE 1).
- The study programme must find a balance between independence (academic freedom) and dependence on industry. The students' interests need to be kept in mind (INT ME DE 2).
- Through the study programme students get an opportunity to grow, but the students themselves are ultimately responsible. It is up to them to get appropriate jobs. The study programme and the students are in partnership (INT ME IE 2).

Interestingly, the Flemish professional field organisation says that employers share in the responsibility; they should maintain close connections with study programmes (INT PF EM FL).

5.1.1.4 The quantitative and qualitative connection of graduates to the labour market

Flemish and Irish study programmes in the interviews referred to information collected on national level about labour market needs (INT EM FL 2, INT ME IE 1). The Flemish Council for Science and Innovation commissioned a report on young people's educational choice for technical and scientific studies (Van den Berghe & De Martelaere, 2012). The report stresses the need to increase the number of graduates in natural sciences, applied sciences, ICT and engineering.

In Ireland two agencies provide information with which the programmes can determine skills gaps in their specific fields. The agencies are Industrial Development Agency Ireland (IDA Ireland) and the Expert Group on Future Skills Needs (EGFSN). Every college in Ireland looks at the reports. However, it is not mandatory for colleges to react to the gaps, but most of the funding of the colleges is based on the number of students. Hence, aligning the study programme to the gaps to attract students is in the interest of the study programme.

All study programmes report that the labour market opportunities for engineering graduates are large. Hence, the quantitative need of the labour market appears more than sufficient to absorb all engineering graduates. In this respect, one of the study programmes argues that even if the quality of the study programme were half of what it is, the graduates would still find employment (INT EM FL 2). Relatedly, another study programmes argues that the good labour market opportunities can also be dangerous for the quality of the study programme; the demand is so high, that educational quality might become less important for some study programmes

(INT EM FL 1). More alarming is the comment that the capacity of the industry to expand is limited by the supply of graduates (INT ME IE 2), implying that the inability of the engineering programmes to deliver more graduates affects the national and local economies. In this respect the Dutch professional field organisation argues that the institutions should put more effort into attracting students to engineering programmes (INT PF ME NL).

Given the high demand at the labour market, a more qualitative connection of graduates to the labour market, in terms of further or less specialisation, appears not to be a current priority. Nevertheless, one study programmes argues that its employability results are good because the programme does not specialise the students; the graduates can find employment in many different companies (INT ME DE 2).

5.1.2 / Practices in the field of social work/care

5.1.2.1 Results in terms of employability

The study programmes in the Netherlands, Ireland and to some extent Flanders find employment opportunities for social work graduates somewhat bleak at the moment, due to the economic turmoil:

- In the Netherlands many social work graduates take positions below the level for which they were educated, and consequently earn less (INT SW NL 1). Moreover, employment opportunities are affected by government budget cuts that lead to community centres being closed or being run by volunteers instead of paid social workers. A concern of the Dutch professional field organisation is that with social work programmes becoming broader, the distinct specialisation professions might lose their relevance in the eyes of the public, which could lead to even more positions being filled by volunteers rather than by educated professionals (INT PF SW NL).
- In Ireland many social care workers are employed in the public service sector, while because of the crisis the government set a stringent quota on recruitment of employees (INT PF SC IE). Therefore, current social care students lack sufficient employment opportunities and many have to emigrate (INT PF SC IE). One Irish study programme (INT SC IE 1) suggested that graduates finding employment abroad is a result of the incorporation of employability in the programme. For the other Irish programme (INT SC IE 2), the development is a reason to consider improving its connection to the international labour market.
- In Flanders more social work graduates continue their education, but stop once they have found employment (INT SW FL 2). One in three graduates of one programme (INT SW FL 1) continue their study after graduating. However, labour market study results show that this sector employs 28,000 persons, and that the sector annually needs 2,500 persons for replacement and expansion purposes. The need cannot be met with the current number of social-cultural work graduates (annually 500). Hence, employers fill the gap by hiring graduates from other study programmes.

The German study programmes appear to have enough job opportunities for their graduates. One German programme (INT SW DE 1) mentioned that employment opportunities are largely related to the location of the study programme; large and populated regions naturally provide more labour market opportunities (INT SW DE 1). This finding is shared by a Flemish study programme (INT SW FL 1), which sees enough employment in the region.

To give social care graduates better employment opportunities after graduation, an Irish study programme (INT SC IE 2) mentioned keeping the inflow of students consciously low despite high demand among students.

None of the interviewed study programmes claim that it achieves better employability results compared with other social work/care programmes. Perhaps this is because comparative information, for example employment statistics, are largely unavailable (INT SW FL 1, INT SW DE 1) and, as one programme (INT SW FL 2) said, social work programmes have become more standardised through the establishment of common learning outcomes, leaving less room for programmes to be unique.

5.1.2.2 Monitoring employability

As in the other fields analysed in this report, the practices to monitor employability differ by country and by institution. Employability statistics are not collected by the Irish study programmes, nor are they available on national level. The data situation may improve once the registration board for social care practitioner has been set up (INT SC IE 1, INT PF SC IE). Dutch programmes do not collect employment statistics themselves, but they are available from a systematic national survey (HBO-monitor). The German and the Flemish programmes collect employability statistics themselves, of which two practices are described in Box 5.3.

Box 5.3: Practices of three study programmes that systematically collect employability statistics

INT SW FL 1: Graduate surveys are held amongst the graduates of the latest three years. Some also participate in focus groups, giving additional insight to what was learned, was it relevant, etc. Information on graduates who continue their education within the association (collaboration between the college and a university) is shared. The data provide information on graduates' education paths and study success.

INT SW DE 1: The department of the institution that is responsible for the internships collects employability statistics through an alumni survey. The results are discussed by the teachers and provide input for further programme improvements. Furthermore, a consortium of 13 social work programmes jointly collected employability statistics in 2009. Outcomes gave insights in differences between programmes.

Interviewed study programmes that had employment statistics available, supplied the following information:

- INT SW FL 1: 90% of graduates find employment within six months. Over the past two years the percentage dropped somewhat. One in three graduates continue their studies.
- INT SW FL 2: Graduates find employment within seven to eight months. Many graduates continue their education.
- INT SW DE 1: Graduates find a job shortly after graduating; 95% are employed within six months. Also many are already employed during their studies in social work. Some continue their education.

The study programmes can also monitor employability through more qualitative methods, amongst which are:

- INT SW FL 2: A Facebook group of the study programme, to stay in touch with alumni, and to monitor graduates' employment development.
- INT SC IE 2: The programme can monitor employability results through request for references and through talks with alumni. The overall impression is that most graduates find short-term employment upon graduation.

5.1.2.3 Accountability for graduate employability

The social work/care study programmes say they are to some extent accountable for the employability of their graduates. The Dutch professional field organisation agrees with this point of view (INT PF SW NL). A Dutch (SW NL 2) and an Irish study programme (SC IE 1) explicitly say it is important for study programmes to educate students in competences for which there exists current and future demand. Similarly, a German study programme (SW DE 2) feels responsible for the transition of students to their first job. An Irish study programme (SC IE 2) feels accountable for giving the students a good study experience and partly for job opportunities after graduation, and therefore limits inflow of students to 35 per year.

5.1.2.4 The quantitative and qualitative connection of graduates to the labour market

Although there obviously are fluctuations in job opportunities for social work/care graduates, the study programmes appear to have sufficient insight into the sector, enabling them to monitor where there is (going to be) an oversupply or undersupply of social work/care practitioners. Similarly, the study programmes appear to be largely aware of which learning outcomes are relevant to the labour market. Hence, to a large extent the study programmes are attuned to assuring the quantitative and qualitative connection of graduates to the labour market.

Perhaps the study programmes are able to receive the insights described above because the sector is organised, even though it is wide-ranging. Consequently, through the different methods and mechanisms utilized to elicit input from the professional field, (see Section 3.3.2), the social work/care programmes appear to be able to adjust their programmes timely. Of relevance here are also the professional field surveys done by study programmes in the Netherlands, Flanders and one German study programme (INT SW DE 2), two of which are described in Box 5.4.

Box 5.4: Professional field surveys by social work programmes in Flanders

INT SW FL 1: Annually, the institution undertakes a professional field survey of the 1,500 internship-hosting organisations. They are asked about their satisfaction, shortcomings of graduates, the relevance of their competences, and if actually they recruited graduates. Last year, the survey had 700 respondents. The survey serves as input for establishing partnerships between the study programme and specific organisations. Monitored are also the developments related to the economic crisis. More specifically, the study programmes tries to anticipate possible budget cuts and their consequences for graduates. The developments in the sector are discussed with final-year students and the professional field advisory board.

INT SW FL 2: Every three to four years, the study programme surveys the internship-hosting organisations (1,200 organisations). Questions focus *inter alia* on the match between competences learned and needed for the job, the degree to which the internships prepare students for their working life, and if internships have added value to the host organisations. The results are discussed with the professional field advisory board and provide input for further improvements of the programme.

Also in the field of social work there is a discussion on whether a generic or specialised orientation makes graduates most employable (see also Section 4.2.2). Although the data discussed in the section are too limited to warrant conclusive statements, it is interesting that the two study programmes (INT SW DE 1, INT SW FL 1) that mentioned that their graduates had enough job opportunities are also the two programmes that claim to be more academic and generic-oriented, rather than specialist. However, other factors must be taken into account too, such as the location of the institution.

5.1.3 / Practices in the field of tourism

5.1.3.1 Results in terms of employment

The tourism study programmes are satisfied with results of the programmes in terms of employment. Nevertheless, there are some important reservations:

- A substantial part of the graduates find employment in a sector other than the tourism sectors. Those that deliberately do so are often the above-average students (INT TO FL 1).
- The tourism sector is affected by the currently less favourable economic climate (INT TO FL 1). The tourism industry is known to be sensitive to economic ups and downs (INT TO DE 1). However, labour market prospects in the tourism sector appear to be bleaker in the Netherlands and Ireland than in Flanders and Germany.
- Graduates that do not enter the labour market, but continue studying (INT TO FL 2, INT TO IE 2)

The interviewed study programmes are rather reticent about claiming to achieve a better graduate employability in comparison to similar study programmes. Perhaps this reticence can be explained:

- All tourism study programmes face similar challenges due to the dynamics of their environment.
- Employment results depend on the local/regional market situation more than on the programme itself; large metropolitan areas offer the best job opportunities (INT TO DE 2).
- There is not much variation in the quality of the tourism study programmes within the country (INT TO FL 1).
- The lack of comparative information with which the employability results can be compared across study programmes (INT TO IE 2).

5.1.3.2 Monitoring employability

The availability of employment statistics differs per country and per study programme or institution. The two interviewed Irish study programmes did not collect employment statistics at the programme level. Statistics on institutional level might be available (INT TO IE 1). Another Irish programme has some estimates (INT TO IE 2). The two Dutch study programmes rely on employability results from the national survey (HBO-Monitor). One Dutch programme also did a survey among its alumni, but this is not done systematically (INT TO NL 2). The Dutch professional field organisation also monitors employment opportunities in the tourism sector. It noticed that the absorption capacity of the sector dropped substantially since the economic turmoil (INT PF TO NL). The organisation (PF TO NL) is creating a labour market dashboard in which information on the number of students, vacancies and rations are displayed, which results in realistic labour market perspectives. The two German study programmes hold annual surveys among their recent graduates. In addition the German Association of Tourism Educators holds a survey as well

(INT TO DE 1). The practices of the two Flemish tourism programmes differ. One does not hold regular surveys because it does not see an immediate need, as there are currently enough job opportunities for its graduates (INT TO FL 2). The other Flemish study programme (TO FL 1), or rather its institution, annually surveys recent graduates. Moreover, the Flemish professional field organisation researched the tourism labour market and also reviewed the connection of the tourism programmes to the labour market (INT PF TO FL). The organisation (PF TO FL) discussed the outcomes, in particular the bottlenecks, with the sector and education programmes. However, it said that the discussion were not very effective because there are many actors in the sector. The practices of the three study programmes that systematically survey their graduates are described in Box 5.5.

Box 5.5: Practices of three study programmes that systematically collect employability statistics

INT TO FL 1: The institution collects employment statistics through an annual survey among alumni, six months after graduation. They are asked if they continued studying or found employment (and in which sector), and they are asked for feedback on the study programme (satisfaction, preparation for current occupation).

INT TO DE 1: Firstly, questions about students' employment status are a mandatory part of their final assessment in the study programme through a standardised questionnaire. Secondly, one semester after graduation an e-mail survey follows. Thirdly, every two or three years the institution surveys all its alumni.

INT TO DE 2: The institution holds an annual employability survey amongst graduates, including: time between graduation and employment, job type, company, location, job title, job responsibilities, job finding activities, and salary. In addition, the institution participates in the Universum Professional Survey, which is an annual Europe-wide survey through which the employability results can be benchmarked against higher education institutions.

Some interviewed study programmes and one professional field organisation shared employment statistics:

- INT TO NL 2: The most recent statistics show that 90% of the graduates had found employment three months after graduation. The 2012 HBO-monitor, which included 26 students from the programme who graduated in 2010-2011, found that 8.3% of the graduates were unemployed, which is half the national average of tourism programmes (16.4%). Moreover, the HBO-monitor also found that the graduates from the programme earn higher salaries and report greater satisfaction with their jobs and opportunities to advance their careers.
- INT PF TO FL: Unemployment rate a year after graduation for tourism and recreation graduates was 6%, which is 0.7% higher than the national average.
- INT TO DE 1: In 2012, all graduates (100%) of the six-semester programme found a job within three months after graduation. In 2011, 69% of the (international) seven-semester programme alumni found a job within three months after graduation and the remaining 31% continued their studies.
- INT TO DE 2: 70% to 80% have already found employment in the last semester of the programme. Around 70% of the graduates continue their career in the field.
- INT TO IE 2: Although there are no formal statistics, around 75% of graduates continue their studies on level 8, after which many of them go abroad to work. A quarter of the graduates are likely to look for jobs in Ireland.

One Dutch study programme (INT TO NL 1) suggested that the HBO-monitor has a strong focus on the Dutch labour market, whilst the study programme educates for the global labour market, making the HBO-monitor less valid for tourism graduates. Therefore, the four Dutch tourism study programmes consider collecting their own employment statistics, to provide an additional perspective. With international statistics, the nation-wide consortium could give students additional insights into possible career paths after graduation. It was stressed that self-employed status should be part of the data collection, i.e. the entrepreneurs (INT TO NL 2).

Alternatively, graduates' employability can be monitored through a more qualitative approach. For example, one study programmes occasionally monitors online profiles of graduates on Facebook and LinkedIn (INT TO FL 1).

5.1.3.3 Accountability for graduate employability

The interviewed tourism study programmes concluded that they could not be held accountable for the employment of their graduates. Although not accountable, two study programmes say they feel a strong responsibility, which relates to:

1. How the study programme creates the connection to the professional field; if study programmes do not align to what the professional field desires, the employability of the graduates will be less (INT TO NL 1).
2. The study programme needs to know the developments in the different relevant markets and should theorize the development. Based on these analyses, the study programme is to be adjusted when it is no longer relevant. Ensuring that the students achieve relevant learning outcomes is the responsibility of the study programme (INT TO NL 2).

With respect to the second point it is important to note that the study programme is not tailor-made for a specific branch of employers; the ability of the study programme to adjust is a sign of its independence (INT TO NL 2).

5.1.3.4 The quantitative and qualitative connection of graduates to the labour market

As reported by the interviewed tourism study programmes, they are overall satisfied with the employability of their students as well as with the actual employment results. Nevertheless, the study programmes recognise that the tourism sector is highly dynamic, which led to substantial changes over the past years. A concern is the growing breadth of the tourism sector, which makes it difficult to keep a clear picture of the demands of all employers in the sector (INT TO IE 1). Perhaps this also relates to the labour market opportunities for tourism graduates being increasingly international (INT TO NL 1, INT TO FL 2, INT TO IE 1, INT TO IE 2).

The result of a dynamic external environment is that there is uncertainty about the quantitative and qualitative connection to the labour market. Quantitatively, there is uncertainty about where there are labour market gaps. Qualitatively, there is uncertainty about which learning outcomes are relevant to the labour market. The Dutch professional field organisation tries to address these issues through its labour market dashboard (being developed) and annual labour market surveys in which employers are asked about their satisfaction with interns and with graduation theses (INT PF TO NL).

As discussed in Section 4.2.3, the tourism study programmes appear to react to the uncertainties by including:

1. General and soft skills, to increase employability within and outside the tourism sector .
2. Further specialisation. Specialisations can be offered through elective modules.
3. Academic skills, through which students learn to reflect academically on the tourism sector.

Based on the provided employability results, it is impossible to conclude which approach leads to an optimal connection to the labour market, in particular because every approach has an employability disadvantage. With more general and soft skills, a tourism study programme could lose its connection to the tourism sector. Contrariwise, a very strong focus on specialisation could easily make graduates obsolete in this dynamic sector. Lastly, increased academic orientation could affect the professional orientation of tourism study programmes.

5.2 / Stakeholders' judgements on the connection between the labour market and the study programme

5.2.1 / Practices in the field of mechanical engineering/electro mechanics

5.2.1.1 Connection between labour market and study programme

All engineering study programmes and professional field organisations judge the connection between the labour market and the study programme to be good, which also shows in the employability results discussed in section 5.2.1. The study programmes that surveyed employers also report that the employers are satisfied (INT EM FL 1, INT EM FL 2).

Most engineering study programmes try to stay in touch with their alumni, which can also be seen as a connection with the professional field and labour market. Maintaining connections can result in inviting alumni as guest lecturers and in new internship places.

Common ways for study programmes to stay in touch with the alumni include: LinkedIn (INT ME NL 1, INT ME NL 2), personal contacts (INT ME NL 2), a dedicated alumni website (INT ME NL 2) or alumni association (INT ME DE 1), alumni events e.g. an annual 'return to the institution' day (INT ME NL 1), or events organised by the study programme to which alumni are also invited (INT ME NL 2). Alumni associ-

ations are mentioned by one programme, which further voiced that a more formalised alumni policy than an independent alumni association might deter alumni from becoming active (INT ME DE 1).

5.2.1.2 Possibilities for further improvement

The labour market opportunities for engineering students appear to be very favourable. The study programmes also appear to be satisfied with the way they prepare the students for the labour market. Nevertheless, all study programmes and professional field organisations see opportunities for further improvement:

- Improved alumni policies (INT ME NL 1, INT ME NL 2, INT EM FL 1, INT EM FL 2, INT ME IE 1, INT ME IE 2).
- Increasing the number of students that enter engineering programmes (INT EM FL 1, INT ME DE 2, INT ME IE 2, INT PF ME NL), and in particular increased enrolment of female students (INT EM FL 2, INT ME IE 1), as well as improving the retention rate of students (INT ME IE 2).
- More and continuous contact with the professional field (INT ME NL 1, INT ME NL 2, INT ME IE 2).
- Increased internationalisation of the study programme (INT EM FL 1, INT EM FL 2, INT ME IE 2).
- Integrating internships in the curriculum (INT ME IE 1, INT ME IE 2).
- Offering additional training in, for example, management (INT ME DE 1, INT ME DE 2).
- Inclusion of more soft skills (INT ME IE 2), and more modules in English (INT ME DE 1).
- Establishing a professional field advisory board (INT ME IE 1).
- Setting up an account management system to facilitate contacts with the professional field (INT ME NL 2).
- Given the labour market shortage, the Irish professional field organisation favours colleges offering life-long learning programmes through which engineering or non-engineering graduates may be trained for engineering specialisations in high labour market demand (INT PF ME IE). Colleges could offer such conversion programmes through evening, distance education, or work-based programmes.
- According to the Dutch professional field organisation improvements may be sought in: the connection of teachers with the professional field (e.g. teacher internships), improved relevance of professional field advisory boards, intensifying relations with internship-hosting organisations, improving feedback from internship-hosting organisations and from alumni, more attention to life-long learning, and in improving cooperation study programmes with each other and with the professional field (INT PF ME NL).

One study programme notes that the possibilities for further improvements are hindered by the short duration of the programme (INT ME DE 2). However, when faced with a deterioration of the labour market, the study programme would focus more on providing soft skills; stronger focus on preparing the students for the labour market by offering, inter alia, job training, and by providing more voluntary modules in addition to the regular curriculum (INT ME DE 2).

5.2.2 / Practices in the field of social work/care

5.2.2.1 Connection between labour market and study programme

By and large, the study programmes judge the connection of their programmes to the professional field to be good. The interviewed Dutch professional field organisation agrees. However, actual employment opportunities are affected by the current economic turmoil and, as suggested by the study programmes, the location of the institution as well as governmental policies.

The study programmes receive feedback from the stakeholders on how the programmes connect to the labour market, e.g. through the alumni or graduate surveys and the professional field surveys (Section 5.2.2). Some study programmes seek feedback from internship-hosting organisations. Two study programmes provided detailed insight into the feedback received from employers:

- INT SW DE 1: To the frustration of the study programme employers appear to have little interest in the academic theories in the field of social work; sometimes employers decline internship request from students which seem too theoretical, too little 'real life' oriented. This implies that during actual jobs often the link to theoretical knowledge is lost. This concern is also pointed out by the professional field organisation in the Netherlands: research skills are little used in actual jobs (INT PF SW NL).
- INT SW FL 1: Only after some years of experience with increased academic orientation of the bachelor's thesis employers see the added value. The study programmes concluded employers sometimes are not aware of their needs.

Alumni as important stakeholders may become part of, or be consulted by, the professional field advisory board (INT SW FL 2).

Although comprehensive alumni policies appear to be lacking at all studied social work/care programmes, the programmes

organise events for alumni (INT SW NL 2, INT SW FL 2, INT SW DE 1, INT SC IE 2) or events to which alumni are invited (INT SW NL 1, INT SW FL 1). The two Flemish study programmes mentioned using social media (Facebook, LinkedIn) to keep in touch with their alumni.

5.2.2.2 Possibilities for further improvement

The social work/care study programmes see possibilities for further improvement of their connection to the labour market. The improvement directions focus on the following aspects:

- Better partnerships with organisations in the field (INT SW NL 2, INT SW FL 1, INT SW DE 2, INT SC IE 1, INT SC IE 2).
- Internationalisation (INT SW NL 2, INT SW FL 1, INT SW FL 2).
- Collection of employability statistics (INT SC IE 1, INT SC IE 2, INT SW DE 2).
- Development of alumni policies (INT SW FL 1, INT SC IE 1).
- Better linkages between teachers and the professional field (INT SW NL 1, INT SC IE 2).

The professional field organisation in the Netherlands also sees possibilities for improvement, particularly in relation to enhancing the self-awareness and entrepreneurial spirit of students (INT PF SW NL).

5.2.3 / Practices in the field of tourism

5.2.3.1 Connection between labour market and study programme

Although affected by the dynamics of the tourism sector, most study programmes judge the connection between the labour market and the study programme to be good, as does the Dutch professional field organisation (INT PF SW NL). The Flemish and German study programmes appear to be particularly confident, which could be because the labour market opportunities in these countries appear to be relatively positive. Alternatively, it could mean that the German and Flemish study programmes were better aligned with the needs of the labour market.

Some study programmes received feedback from employers. One study programme indicated that employers confirmed that the graduates learn the right knowledge and skills, which makes them employable (INT TO FL 1). In Germany, information on how institutions as a whole enhance the employability is presented in a countrywide and discipline-specific ranking based on insights of HR-managers of large companies (INT TO DE 2). In the Netherlands, the institution to which one of the interviewed programmes belongs, annually monitors the professional fields' satisfaction (INT TO NL 2). All organisations that host interns or provide assignments are then surveyed. The monitor shows that the industry is particularly satisfied with teaching and learning, the capacities of the students, the level of the programme and the communication and image of the programme (SER - INT TO NL 2). Professional field organisations also have a role in supplying study programmes with feedback. The Flemish organisation did so through its labour market research (INT PF TO FL) and the Dutch organisation through its annual survey amongst tourism employers (INT PF TO NL).

Alumni are also important stakeholders, through which study programmes can collect quantitative and qualitative information on where graduates found employment. Alumni also form an additional link to the labour market; e.g. alumni may judge bachelor theses (INT TO FL 1). Alumni can also provide input through alumni surveys (see Section 5.2.3) or through personal contacts (INT TO DE 2). Methods to stay in touch with alumni include:

- An alumni association (INT TO NL 2, INT TO FL 2, INT TO DE 2).
- Alumni events (INT TO NL 2, INT TO FL 2, INT TO DE 2).
- Online communities on social media (INT TO FL 1, INT TO FL 2). The communities are used to share job vacancies (INT TO FL 1, INT TO FL 2).
- An alumni newsletter (INT TO FL 2).

5.2.3.2 Possibilities for further improvement

The tourism study programmes see possibilities for further improvement of their connections to the labour market. Of particular importance appears to be to continuously look for new stakeholders, partners and networks (INT TO NL 1, INT TO NL 2, INT TO DE 1).

The tourism study programmes also appear to see possibilities to further improve their programmes to react to the three uncertainties. Options suggested include: further internationalisation of the study programme (INT TO NL 1); more entrepreneurial skills (INT TO NL 2); more elective modules for market segment specialisations (e.g. aviation management; INT TO DE 2). In a different response to the increased permeability of the market, i.e. the increased proportion of graduates finding jobs outside the traditional tourism sector, one programme considers changing its name to 'tourism and services' (INT TO IE 1).

Other possible improvements to improve the connection to the labour market and professional field include:

- Strengthening the alumni relations and developing alumni policies (INT TO NL 1, INT TO FL 1).
- More prominent role of students in the evaluation of internship places (INT TO NL 2).
- Collection of more statistics to gain additional insights (INT TO FL 2).
- Giving the professional field advisory board more tasks related to the employers' connection to programme (INT TO DE 1).

The professional field organisations also see possibilities for the study programmes to improve their connection to the labour market:

- INT PF TO NL: Hiring more teachers who simultaneously stay active in the professional field, sector-wide alumni policies (i.e. common policy to keep as many good tourism graduates in the tourism sector), and further broadening of the study programmes, thus moving even more away from tourism specific outcomes.
- INT PF TO FL: More clarity about the difference between tourism programmes (i.e. which learning outcomes are included in each programme) and the connection to the labour market could be improved by making the programmes more generic.

5.3 / Summary and conclusion

By and large the study programmes and stakeholders appeared satisfied with the achieved employment of their graduates. However, the results were strongly related to the economic situations of the particular domain and country or region. Other factors that affected the employment results included the location of the institutions, governmental policies, graduates finding employment outside the field for which they were educated, graduates continuing their education, and fragmentation of the labour market. Influences of having domain-specific sets of intended learning outcomes on employment results are ambiguous.

Study programmes deployed different monitoring strategies to get insight into the employment results of their graduates, as well as the satisfaction and future needs of employers. Some programmes or their institutions regularly surveyed alumni and employers, while others did not do this systematically or used more qualitative methods (e.g. monitoring LinkedIn profiles). Alternatively, alumni surveys could be organised nationally, as in the Netherlands (HBO-monitor). Overall, we saw a virtuous circle in which increased contact between programme and professional field led to higher mutual satisfaction.

Quantitative (demands on labour market) and qualitative (need for specialisation) perspectives are important to monitor employability and to inform strategic decisions of study programmes (e.g. to move towards broader or rather towards more specialised programmes). Such insights study programmes or their higher education institutions collected through surveying employers for trends and by asking their feedback on the relevance of learning outcomes currently included in the study programmes. In some cases alumni too evaluate learning outcomes. Monitoring of skills gaps was to some extent facilitated by government agencies in Ireland and in Flanders. In the Netherlands and in Germany study programmes had to monitor the trends regarding skills needs themselves.

Particularly tourism programmes needed to be aware of the quantitative (demands on labour market) and qualitative (need for specialisation) developments. Such information was used to inform important strategic decisions of study programmes, e.g. to move towards broader or rather towards more specialised programmes. Both strategies were used.

Study programmes felt largely responsible for employability of students; they considered it their job to link to the professional field. But they also recognised the role of the professional field itself. In this respect we found that some employers and professional field organisation were more active than others. Tourism programmes stressed their responsibly in terms of creating links to the professional field and being aware of the developments in the sector, but stated they could not be held accountable for graduates finding employment. In contrast, the study programmes in the other two domains appear to be more comfortable saying that they are responsible and partly accountable.

Chapter 6

Process management and evaluation

In quality assurance (internal and external) attention should be paid to the extent to which the envisioned programme learning outcomes are attained and if the requirements are (still) in line with the needs of the labour market (input phase). This is the core of our final research question, shown below.

Process management and evaluation: what is the role of employability in the quality assurance?

a. Internal quality assurance: do the self-evaluation reports of the study programmes or institutions include employability factors?
   - To make this evaluation possible, sufficient data on the employability need to be included in the self-evaluation reports.
   - This research question is about how the internal quality assurance evaluates the employability aspects, rather than how the study programme/institutions scores in terms of employability.

b. External quality assurance: do the external quality assurance reports of the study programmes or institutions include employability factors?

The following sections will discuss the empirical data that was collected through interviews for these research questions per field of study. Best practises are recognised and highlighted.

6.1 / Internal quality assurance and evaluation of employability

6.1.1 / Practices in the field of mechanical engineering/electro mechanics

Internal quality assurance processes differ per institution and per country. The two German mechanical engineering programmes appear not to have employability-oriented internal quality assurances processes. They do evaluate the modules taught; however, these evaluations do not evaluate employability aspects as such (INT ME DE 2). As part of external quality assurance, the programmes are required to write self-evaluation reports. These self-evaluation reports include information on what the programmes does to link the programme to the professional field. The self-evaluation reports can also include statistical information on graduate employability. However, showing employability statistics is not mandatory, which could be the reason why the two German mechanical engineering programmes do not collect employability statistics systematically. The programmes were not allowed to share their self-evaluation reports.

The internal quality assurance of the two Irish mechanical engineering programmes appears to be linked to the requirements of the programmatic review that takes place every five years and the accreditation by Engineers Ireland, which takes place every three years. The programmatic review requires study programmes to write a self-evaluation report in which the linkage with industry needs to be shown. Furthermore, the review panel interviews a number of students and employers, in which it asks about the employability (INT ME IE 1). The review by Engineers Ireland appears to have a stronger focus on employability, as it requires the study programmes to write a document detailing the linkage with the professional field, inclusion of employability statistics, and the programme's learning outcomes as well as evidence of achieving the outcomes (INT ME IE 2).

The Dutch mechanical engineering study programmes write self-evaluation reports for the accreditation process. One Dutch study programme does not make any additional self-evaluation reports (INT ME NL 2). However, it does evaluate the modules after every semester. These evaluations do not necessarily focus on employability aspects, but do evaluate the achievement of intended learning outcomes. The evaluation after the internship periods focuses more explicitly on the learning outcomes related to employability. The other Dutch mechanical engineering programme makes self-evaluation reports in addition to the report required for the accreditation process. The practice is described in Box 6.1.

Box 6.1: Internal quality assurance practice of INT ME NL 1

The institution thinks of itself as a learning organisation. The institution's internal quality assurance process includes mid-term reviews, with internal audits three years after the formal evaluation. In addition, there are annual short-cycle evaluations based on all collected inputs (i.e. student satisfaction surveys, teachers' satisfaction survey, feedback from the professional field, panel discussions, HBO-monitor, national student survey, etc.). After every semester, data are collected on students' satisfaction, and what aspects of the study programme could be improved. The results are used to annually adjust the curriculum in a continuous improvement process. The overall curriculum is adjusted after a five-year period, normally in this process a new theme is added.

Based on the outcomes of internal and external quality assurance, the institution identified 'excellent study programmes'. These study programmes are performing above average in comparison to other study programmes and also have the ambition to lead to improved learning outcomes. Mechanical engineering is one of the excellent study programmes. Themes on which the mechanical engineering programme scores better than other study programmes in the institution are: internationalisation, relation education to research, and the curriculum.

The Flemish electro mechanics programmes also write self-evaluation reports for accreditation. Information about the results of the study programme has to be included in the self-evaluation report. The study programmes discuss the results by using employment statistics retrieved through the surveys held among graduates and information collected through the surveys held among employers. Noted should be that inclusion of employability statistics is not a requirement of the self-evaluation reports for accreditation (INT QA FL). The surveys done by the study programmes are part of the internal quality assurance. Both study programmes have made working groups responsible for the internal quality assurance processes. The internal quality assurance practice of one of the Flemish programmes is described in Box 6.2.

Box 6.2: Internal quality assurance practice of INT EM FL 1

Internal quality assurance is based on PDCA-cycles and on the EFQM TRIS model. Before the beginning of the academic year, all educational plans are discussed to answer the question: where do we want to be? Halfway the academic year progress in monitored. The final check is at the end of the academic year.

The internal quality assurance process has been standardised throughout the institution, which stimulates efficiency and cooperation between departments. The system dictates the questions and the frequency of the surveys held among graduates and employers. The reflection groups, which were involved in determining the competences of the study programmes, are also part of the internal quality assurance system.

6.1.2 / Practices in the field of social work/care

All programmes in our study write self-evaluation reports, in which the employability of students is evaluated. Evaluations can be based on the surveys that are held among alumni and the professional field. Surveys among current students are included in such evaluations as well. The internal quality assurance procedures of two study programmes are described in Box 6.3.

Box 6.3: The internal quality assurance procedures of three study programmes

SW FL 1: In addition to the self-evaluation report needed for accreditation, the study programme makes thematic self-evaluations, for example on the introduction of the bachelor thesis. These activities relate to the internal PDCA-cycle, which includes meetings of the professional field advisory board and surveys among the professional field and alumni.

SW DE 2: The internal quality assurance includes an 'academic scorecard', expressing performance agreements between the institution and the departments. Employability objectives are part of the academic scorecard for the social work department. Employability is evaluated as part of the students' evaluation of modules (practice-relatedness) and through surveys among supervisors of internships. The performance agreements are monitored annually.

6.1.3 / Practices in the field of tourism

Through internal quality assurance procedures aspects related to employability can be monitored during the students' study careers. Whether a study programme or institution does so largely appears to depend on the country-specific traditions and contexts.

In the Netherlands, the self-evaluation reports for accreditation contain a number of aspects that relate to employability of students and graduates. Included are for example the employability statistics gathered in the HBO-monitor, information on the professional experience of teaching staff, alumni relations, and the demands as well as the link to the professional field. In addition, the self-evaluation reports reflect on student satisfaction, which includes estimates of preparation for employment through the study programme.

The practice of using external examiners, as discussed in section 4.2.3, is also part of the internal quality assurance framework of one study programme (INT TO NL 1). Moreover, the intention of the four Dutch tourism study programmes to cooperate to collect employability statistics can also be seen as part of the internal quality assurance framework.

Two interesting aspects of the other Dutch tourism study programme's internal quality assurance framework are (INT TO NL 2): the annual professional field satisfaction monitor by the institution and the account management system through which teaching staff match students to organisations that have proven to be good internship providers. Results include more satisfied students and satisfied internship-hosting organisation, as is shown in the professional field satisfaction monitor.

The Flemish study programmes also write self-evaluation reports for accreditation, which are partly based on continuous internal evaluations. An example is student satisfaction surveys, which are held after every semester (INT TO FL 2). However, those surveys do not contain employability factors. As part of the internal quality assurance framework in the other Flemish programme, aspects related to employability (e.g. practical orientation of modules) are discussed in in weekly staff meetings (potential curriculum changes), stakeholders are then asked to provide input on the proposed changes e.g. through the professional field advisory board (INT TO FL 1).

Self-evaluations are also done by the two German tourism study programmes. The questions to be addressed in the self-evaluation are fixed. Some concern employability: is the study programme meeting the expectations and needs of the market, and to which degree have the market's expectations been included in the study programme (INT TO DE 1).

In Ireland self-evaluation reports are part of the recurrent programmatic review. Reports also need to be written when new programmes are set up. The study programmes need to report on employability aspects, such as the percentage of students that found employment in a particular sector. If employability prospects of students are not sufficient, programmes may be closed (INT TO IE 1).

6.2 / External quality assurance and evaluation of employability

The general external quality assurance processes of the countries included in this study have been described in Chapter 2. There we also described how the external quality assurance evaluates employability factors of study programmes. Relevant here is how the study programmes think that the external quality assurance can improve to include more employability focus.

6.2.1 / Practices in the field of mechanical engineering/electro mechanics

The study programmes' suggestions for improvements are:

- The government should look for methods with which students can be directed to study programmes for which there is a demand from the professional field. External quality assurance can perhaps encourage this by identifying excellent study programmes and by having a stronger focus on the selection mechanisms of study programmes (INT ME NL 1).
- A strong focus of external quality assurance on employability is not necessary; the evaluations by the study programme are sufficient (INT EM FL 2).
- The programmatic review focuses on a number of criteria, which can all be linked to the strategy of the institution. One of the five pillars of the institution is the linkage with industry. In external quality assurance and in the institution's strategy, one pillar should not be put over the other; they all are relevant. One also has to be mindful of not losing sight of the actual content on the subjects; i.e. content being pushed out to the benefit of employability (INT ME IE 1).
- For the programmatic review, the study programmes select the review panel. The review is very much focused on process; it is required to show the design of the programme, rather than the evidence of achieving actual outcomes. For the Engineers Ireland review the study programme does not select the panel and the review focuses on evidence. The drive to focus on employability rather comes from the Engineers Ireland review (INT ME IE 2).

6.2.2 / Practices in the field of social work/care

Employability is part of the external quality assurance processes of the countries in this study. In this respect, an Irish study programme (INT SC IE 1) predicts that once the registration board is in place, external quality assurance will be strengthened; it will examine the study programme every three years. The programme sees this as an improvement over the current less stringent external quality assurance procedures. Also the Irish professional field organisation argues that the study programmes welcome the registration board as this gives legitimacy to their particular field of study (INT PF SC IE).

According to the programme, employability aspects should be an important aspect of the external evaluation. A German programme (INT SW DE 1), on the contrary, supports that the external quality assurance focuses not only on employability, because there should be a balance between employability and requirements of educating professionals. Similarly, a Flemish study programme (INT SW FL 1) argues that rather than the visitation committee forwarding its own interpretation of employability, the committee could focus more on the relevance of study programme and students to the professional field, and take into account the dialogue the study programme has with the professional field.

6.2.3 / Practices in the field of tourism

In relation to the external quality assurance and its inclusion of employability aspects, two study programmes mentioned concrete possibilities for further improvement:

- Currently, the focus of the external evaluation appears to be on the end results following examinations. However, as the field becomes more dynamic and increasingly requires multidisciplinary approaches, traditional examination practices might become less relevant. Instead there might be a need to focus on the quality of the learning experience, rather than the learning outcome (INT TO NL 2).
- The external quality assurance framework requires the study programme to align with national standards (i.e. the domain-specific learning outcomes), which could hinder timely adjustment to new developments in the sector. Therefore, the external quality assurance should rather review the ability of the study programme to adjust to the developments in the sector and evaluate if a study programmes can do so timely (INT TO NL 2).
- External review committees that want to receive more details on employability should get in touch with the sector themselves to gain more information on employability (INT TO FL 2).

In addition to the national external quality assurance procedures, there is also an international and tourism specific quality certification framework, which is developed by the United Nations World Tourism Organization (UNWTO). The framework, known as the UNWTO TedQual, reviews the participating tourism programmes every four years and also looks into employability aspects, such as integration of employers in the curriculum development process. Participating programmes have to perform a self-evaluation. Two of the eight interviewed tourism programmes are UNWTO TedQual certified.

On a different note, an Irish tourism programme states that employability should not be a fundamental deciding factor in the programmatic review: it is not the sole purpose of the study programme to educate students for a specific sector;

education has a much broader perspective (INT TO IE 1). Perhaps this contrasting view can be explained by the national differences in the extent to which the programmes are professionally oriented, which is less pronounced in Ireland.

6.3 / Summary and conclusion

Internal quality assurance practices related to employability differed per institution. Nevertheless, writing of self-evaluation reports is common practice. However, the content (e.g. statistical information) and frequency of analysis (depending on quality-assurance cycles) differ per country, institution and study programme. Self-evaluation reports can focus on employability, particularly if it is an aspect in mandatory accreditation procedures.

Particularly the larger institutions had formal procedures to elicit information from the professional field, to involve the professional field in education and examination and to collect employability statistics. A good practice is to have documented PDCA-cycles for the different phases. We saw that the quality assurance practices of smaller institutions were more informal: e.g. meetings with the employers were organised ad hoc and (qualitative) employability information was gathered through face-to-face contact with alumni.

The study programmes were largely satisfied with the inclusion of employability in external quality assurance, although the practices and intensity of the focus differ per country. Most study programmes said a strong focus on employability in the external quality assurance was not necessary. Alternatively, programmes – especially those educating in tourism – indicated that external quality assurance could focus more on:

- The achieved academic level.
- What the programmes had done to create linkages to the professional field.
- The quality of the learning experience, rather than on the learning outcome.

In light of the different needs it was suggested that a focus on national standards (i.e. domain-specific learning outcomes) could hinder timely adjustment of study programmes to developments in the sector. Consequently, it was argued that the external quality assurance could decrease its focus on the incorporation of domain-specific learning outcomes and rather review the ability of the study programme to adjust timely to developments in the sector (INT TO NL 2).

Usage of international quality frameworks, in addition to the national quality frameworks, appears to be most common among tourism programmes. The interviewed study programmes in the other domains did not mention using similar international quality frameworks.

Chapter 7

Conclusion: Preparing professional bachelors for professional life

Our study into how students in professional bachelor programmes are prepared for employability involved two main elements: an overview at the higher education system level, and case studies at the level of study programmes (and higher education institutions). At the national level we are mainly concerned with frameworks, regulations and quality assurance arrangements. At the programme level, we see how the lived reality compares with official policy.

This chapter will reflect on each of the research questions that guided the project from the beginning. The research questions' themes guide the titles of sections 7.3 and onwards. Before we treat them we go briefly into the design of the study (section 7.1) and into the logic underlying the research questions (section 7.2).

7.1 / Two-level study: the approach

At the system level we have four cases where professional higher education has been organised into a separate sector of higher education since long: Flanders, the Netherlands, Ireland and North Rhine-Westphalia. Two are national higher education systems (Ireland and the Netherlands), two are sub-national. Of the latter, Flanders is practically autonomous regarding higher education, while in North Rhine-Westphalia authority over higher education is shared between the state and the federal level. This creates very different contexts for the cases at the programme level, on which we put most emphasis on our study. In each of these higher education systems, we sampled the same three domains: mechanical/electromechanical engineering, social work/social care, and tourism. The fields were selected to be diverse regarding their labour market, yet cross-nationally recognisable and large in the sector of professionally-oriented higher education.

At the programme level, then, we reported on interviews with study programmes and with professional-field organisations (which are system-level actors, but which are viewed here mainly in their relations to study programmes). What emerges is the reality of organising higher education for learning outcomes as experienced at the shop-floor level. It may be disquieting, but all the more relevant to note if differences appear between experienced norms and official, formal regulations and norms.

We selected 24 study programmes for which we had reason to believe they were in the forefront of preparing their students well for employment,[14] and within the programmes we interviewed persons in the positions of local experts on the matter rather than random teaching staff. In other words, if there is a bias in the responses, it is on the side of more knowledge of national norms and towards 'socially desirable answers' (showing more implementation of system-level learning outcome policies than is real), not on the side of ignorance about learning outcomes or resistance against them. Note, however, that in most of our interviews we gained an impression of openness about issues and problems, so that in our estimation, there was no reason to suspect significant bias to our research results.

7.2 / Logic of the research questions

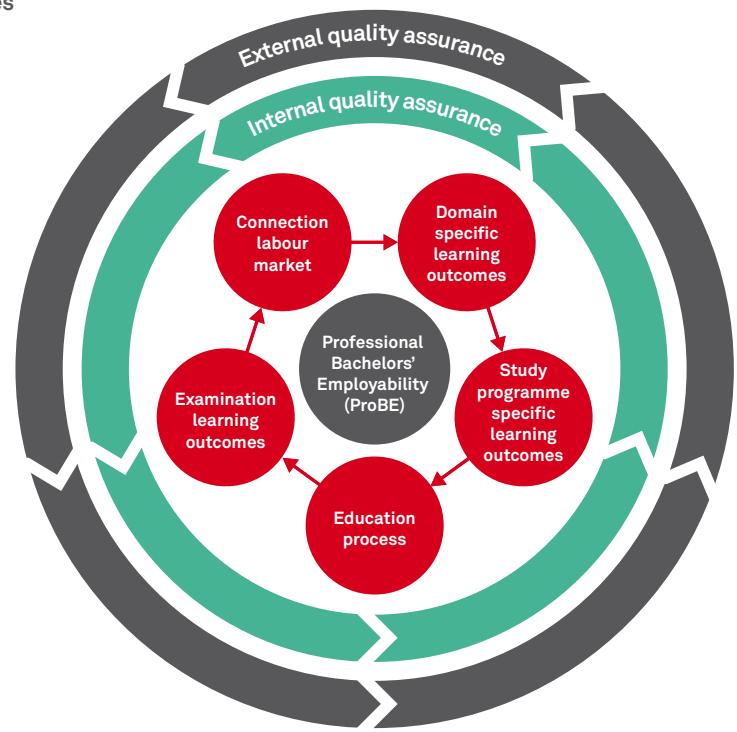
As we discussed in Chapter 1, for study programmes in higher education, and especially for professional bachelor programmes, keeping the labour market in mind as the primary destination for students is an important consideration. Handbooks on quality assurance emphasise that the 'customer' should be the focus of attention in every phase of an organisation's activities. Whether the main customers are the students as future professionals, or the employers as stakeholders in the labour market, does not make a large distinction in that respect: students' and employers' interests run parallel, at least at an abstract level.

To get a grip on this view of study programmes, we conceived of the employability of professional bachelors as the resultant of the cycle of activities in study programmes, with a special view on the feedback and quality assurance cycles that ought to support the primary process of education (teaching and learning), symbolised in Figure 7.1, which was presented in more detail in Chapter 1.

The research questions through which our study was organised, mirrored this figure, looking at how in each phase of the educational process attention was given to learning outcomes and employability, and how internal and external quality assurance supported that.

14 Comparison of our cases with those presented at EURASHE's 24th Annual Conference, 'Qualifications for the Labour Market' (Yerevan, May 2014) gave a post-factum confirmation of the appropriateness of our sample.

Figure 7.1: Learning outcomes in the education and quality assurance processes



7.3 / Organisation of the translation of domain-specific learning outcomes to study programmes

The model underlying our study presupposes that in the current higher education framework in Europe, the definition of intended learning outcomes across all of the EHEA is made compatible through the EHEA's qualifications framework. The framework's text is short and abstract, and needs to be made more operational in countries, through national qualifications frameworks, and in the different areas of knowledge, through domain-specific formulations of learning outcomes. But while there is a set of instruments to implement national qualifications frameworks, and to verify their EHEA-wide compatibility, there is not an instrumentation of the European desire to see domain-specific formulations of learning outcomes in all areas. The Tuning-approach is setting important steps in this direction, nevertheless.

7.3.1 / To which degree and how do study programme-specific learning outcomes reflect the domain-specific learning outcomes?

The first sub-question is what the situation is regarding the presence of system-level domain-specific learning outcomes. It appears that, as seen from the shop-floor level, such **sets of intended learning outcomes per domain are present in all three areas only in the Netherlands**; in Flanders study programmes are aware of them in social work and tourism; in Ireland only for mechanical engineering; while in North Rhine-Westphalia study programmes do not work with them in any of the three domains.

Table 7.1 Presence of domain-specific sets of learning outcomes

National domain-specific learning outcomes exist	BE (VL)	NL	DE (NRW)	IE	Total
(Electro-) mechanical engineering (ME/EM)		X		X	2
Social work/care (SW/C)	X	X			2
Tourism (TO)	X	X			2
Total	**2**	**3**	**0**	**1**	

As the table illustrates, the contexts for the study programmes differ by higher education system (country) and by domain. We might add that institutional profiles and strategies also have different degrees of influence on how study programmes work with sets of intended learning outcomes.

On the whole, domain-specific sets of intended learning outcomes have been translated into study programmes' curricula, but through different modes and in different degrees across the 24 study programmes included in our study. In the following, we will list the main differences encountered.

The professional field is to a large extent taken into account, but intensity varies. On average the lowest openness to the professional field is found in NRW, though tourism is the exception, probably because it is taught in private HEIs. Next comes Ireland (exception ME), while the field's influence seems largest in the Netherlands and in Flanders (though through different *modi operandi*). Intended learning outcomes

are adjusted to the profile of HEIs and location/region, which is why domain-specific learning outcomes need to allow room for flexibility.

Flemish study programmes are very active individually to collect input from the professional field and each used different methods to do so. A question might be if their activity is influenced by the absence of domain-specific learning outcomes validated by the professional field. Meanwhile, the VLIR/VLHORA procedure makes it mandatory to seek the agreement of two representatives with domain-specific learning outcomes.

At the system level, in all three domains, **establishing domain-specific sets of intended learning outcomes and translation processes into local intended learning outcomes is a complex process**; respondents spoke of barriers (insights PF ME NL).

The diversity of the tourism sector is mentioned as the main reason for the absence of a single representative body (INT TO IE 1), which made defining a single set of intended learning outcomes for the domain impossible in Ireland. In the Netherlands, however, domain-specific learning outcomes were formulated under similar circumstances; in that country, one organisation in the field is particularly active.

Study programmes can be locally, nationally and/or internationally focussed in their perspective on the professional field. **Engineering (ME/EM) and social work/care were mainly regionally oriented, though not exclusively. The tourism programmes were more nationally and internationally oriented.**

Individual programmes' specifications or adaptations of domain-level expected learning outcomes were mostly communicated by using key words derived from the institutional profile, thus showing the relevance of the institutional level; for instance:

- Valuable professionals (ME NL 1).
- Sustainability (ME NL 2; SC IE 2).
- Talent development (ME FL 2).
- Innovation (ME IE 1) and marketing (TO FL 1).
- Entrepreneurship (ME IE 1; SC IE 2; TO NL 1).
- Christian background & values (SW NL 1).
- Imagineering (TO NL 1).
- Multidisciplinary knowledge (e.g. software - TO NL 2).
- Regional emphasis in labour market demand (e.g. youth welfare - SW NL 2; family & community support - SC IE 1).

7.3.2 / Methods and mechanisms to attune intended learning outcomes of professional bachelors' study programmes to the professional field

Many different methods are used across the 24 cases. **Most common is to have a professional field advisory board.** Although these bodies are common, they do not have similar compositions (locally, national or international representatives; shop-floor professionals or CEO's; age criteria) or roles (focus on operational or strategic level). Some study programmes have boards on two levels: general and more module-specific. To balance the input from the advisory boards (preferences of one employer might be pushed) study programmes could enlarge the board, thus collecting more insights and preferences (INT ME FL 1). Prevalent too are: **teachers with professional experience, informal contacts with professional field, input from internship-hosting organisations**.

The size of institution and of the study programme in terms of number of students is the main factor that influences whether contact with the professional field is structured formally or more informally. There is also a strategic element, though, in deciding about the degree of formalisation of links with the professional field; in one case formalisation was thought to affect the willingness of employers to participate negatively (INT ME DE 1).

Dynamics of the sector heavily influences the need felt for frequent changes in the curricula of study programmes: especially, in tourism far more dynamism is experienced than in mechanical engineering and in social work/care. **Tourism study programmes appear to follow three, non-exclusive, strategic approaches to cope with the dynamism of the sector,** besides annual updating of programme content. One is to avoid problems of the broad range of the field by developing **close linkages with niches in the profession**: increased specialisation including new developments. Against that, two types of broadening students' education are followed to diminish the need of continuous curriculum change. On the one hand, broadening takes place by **focusing more on general and soft skills**; on the other hand, broadening may mean an **increased academic orientation and involvement in research** for and by students.

Professional field organisations are important in voicing needs of the sector. They can do so through involvement in setting the domain-specific learning outcomes and through participation in study programmes' professional field advisory

boards. **Absence of professional field organisations in certain domains makes it more difficult for study programmes to gain a good view on desired learning outcomes**. However, there are other methods that study programmes apply instead, e.g. focussing on particular employers in the region. Looking the other way around, the focus of professional field organisations on education depends on the mission of the organisation.

There is also a **reverse flow of information from study programmes to the professional field**. For instance, social work programmes in Flanders emphasised the need for research components in daily practice to the employers, and disseminated understanding of the bachelor-master system.

7.3.2.1 Good practices

We found that there were multiple ways to gain continuous feedback from the professional field, before curriculum change, during and after. Many programmes employ their professional field advisory board in all of these phases.

The other interesting example is how strong focus was put on monitoring trends in the field from within the study programme in many different ways in order not to miss any development, which was particularly important for study programme in highly dynamic sectors, i.e. tourism.

7.4 / Link between study programme and professional field in education and examination

By and large study programmes were of the opinion that they included the learning outcomes employers want. Major and most common methods to organise the link between study programme and professional field in education and examination were the following:

- Internships (also for study programmes to get feedback).
- Projects / problem based learning.
- Teachers with professional experience (teachers on internships).
- Guest lectures.
- Field trips (mainly in ME and TO).
- Elective modules.

Some unique methods were found next to the common ones: a programme with its own learning enterprise (TO NL 1, TO DE 1), another with internal internships (TO NL 2), and there were programmes where lecturers informed students in advance which competences would be taught during the module and how those competences related to the professional field. The importance of knowledge management emerged in some cases to create and maintain links with the professional field. Thus, one study programme tracked all contacts with the professional field in a central database, e.g. when teachers visit the in-company internship supervisors (INT ME FL 2), to facilitate sharing knowledge about practice within the school. Somewhat similar, two study programmes introduced an account management system: teachers were made responsible for contact with certain organisations in the professional field, to maximise chances on finding internship positions, project cases, or research projects (TO NL 2, ME NL 1).

Professional field involvement in examination of students was another method to make employability arguments 'count' for students. Thus, the professional field was often involved in internship assessment, project assessment, role-play assessment (SW NL 1), and sometimes in a (graduation) jury (common in mechanical engineering).

Other methods encountered in the study focused on **transferring employability-relevant skills outside the direct domain-specific ones**, e.g.:

- Soft skills: communication, job attainment training (interview skills, networking skills (TO), professionalization LinkedIn profile (TO NL 2), and language skills (particularly TO).[15]
- Some higher education institutions have dedicated centres (outside study programmes) to facilitate job related skills.
- Less common methods included:
  - Entrepreneurial skills (they are common on paper, but less often seen in actual curriculum; exceptions, e.g. small business projects ME FL 1).
  - Alumni connections/events (many study programmes indicated that this aspect can be improved).
  - Internationalisation (many study programmes indicated that this aspect can be improved, exceptions are TO DE 1, TO DE 2).
  - Special initiatives for excellent students: honours programme (ME NL 1), small business project (ME FL 1), certificates of special attainments (ME FL 1), and a trainee programme (TO NL 1, SW DE 1).

15 In the 2013 report on PIAAC, a major 'soft skill' was key information-processing skills such as literacy, numeracy and problem solving in technology-rich environments. It may be remarkable that our interviewees did not mention information or ICT skills (see also Glass, 2013).

Employability of international students is not a primary concern of study programmes in our research. International students are treated like nationals with regard to learning outcomes.

7.4.1 / Good practices

Among the practices found in the different study programmes we highlight some that seem interesting for wider application.

- Cooperation among study programmes (particularly in: SW NL, SC IE, SW DE). The cooperation among social care/work programmes is strong in contrast to mechanical engineering and tourism programmes.
- Cooperation of study programmes with a pro-active professional field organisation (TO NL).
- Keeping the students – and through them: the curriculum – up to date on the trends and developments in the sector: students weekly review travel sections of newspapers and search articles on particular topics, to replace out-dated examples from academic textbooks (TO IE 2).
- Multi-disciplinarity: broader knowledge and skills to enhance employability.
- Creating a community of employers, students and teachers, for projects, internships, guest lectures, research and input for programme.
- Making use of the community created: one study programme asks the professional field for investments in terms of making internships and projects for students to do available. The reasoning is that investment by the professional field results in a win-win-win situation: organisations get in touch with students as potential talent in an early stage of their studies; the study programmes gets its external focus and increased contact with the field; and students get additional motivation because their assignments are real-life cases. (INT ME NL 1).
- Be inspired by models from vocational education: Together with the Faculty of Economics, the Faculties of Engineering initiated an education model that combines study with work, similar to Germany's vocational education. Companies select students that they want to follow the special programme. Students are hired by the companies as apprentices (four days per week) and receive formal education from the institution (one day per week) (INT ME DE 1).
- Recognition of prior learning, to get practice-schooled and practice-aware learners.

7.5 / Results in terms of employability

Influences of having domain-specific sets of intended learning outcomes on employment are ambiguous. Employment obviously varies more depending on labour market demand, than on the differences among these 24 professional bachelors' study programmes' ways of incorporating employability aspects.

7.5.1 / Quantitative and qualitative connection of graduates to the labour market

Employment differences were most marked according to the economic situation of the three domains and of the four countries. Thus, our engineering programmes were very positive about employment results. Employability was seen, in this domain, as the result of study programmes. In the domain of social work, German programmes were mainly positive about employment results for their graduates. In Flanders the studied programmes were still somewhat positive, while Dutch and Irish programmes appeared to be more pessimistic about the employability results. In tourism, finally, study programmes were largely satisfied with employability results, but we noticed some important reservations, focusing on large proportions of graduates being employed outside the sector, on the economic climate, and on graduates continuing studying. In sum, the main factors influencing employability results were:

- General labour market demand (quantitative connection).
- Need for the specialisation (qualitative connection).
- Location of institution.
- Government policies (e.g. budget reductions in social work).
- Wish of graduates to continue their studies (outcomes of study programmes not only work related).
- Fragmentation of labour market(s) (less fragmented is easier to monitor).
- International mobility (harder to track mobile graduates).
- Number of students: limiting the inflow of students to match absorption capacity of the labour market (SC IE 2).[16]

16 Note that the goal of ensuring employment for students may act against other goals authorities can have with higher education, e.g. enrolling large numbers of students to widen participation.

Methods or indications study programmes used to monitor their success in assuring employability of their students, included:

- Number of graduates who find employment within a certain time after graduation.
- Number of graduates hired by organisations where they did their internship.
- Rate of graduates who find employment on the level for which they were educated (not always the case in SW NL).
- Rate of graduates who continue their education at master level.
- Rate of graduates who find employment in the sector for which educated.
- Rate of graduates who find employment in the region, or abroad.

Many different methods were in use to collect insight into employability results: national survey (NL), institutional surveys (EM FL 1, ME IE 1, ME IE 2, SW DE 1, TO IE 1, TO FL 1, TO DE 1, TO DE 2), the faculty (INT ME DE 1) or study programme surveys (EM FL 2, ME DE 2, SW FL 1). For the statistics to be useful they need to be broken down to employability results per study programme; some institutional-level surveys lacking that option were useless for programme planning (ME IE1, ME IE2). Employability insights can also be gained from professional field surveys (SW NL 1, SW NL 2, SW FL 1, SW FL 2, SW DE 2) and other research by professional field organisations (PF TO NL, PF TO FL, TO DE 1).

Insight can also be obtained from qualitative methods, e.g. monitoring LinkedIn profiles, and informal contacts with alumni.

Quantitative (demands on labour market) and qualitative (e.g. need for a specialisation) perspectives are important to monitor employability and to inform strategic decisions of study programmes (e.g. to move towards broader or rather towards more specialised programmes).

Higher education institutions and study programmes are learning organisations, getting their information e.g. through surveying employers for new trends and developments, for relevance of included learning outcomes, and for evaluating learning outcomes among alumni. Monitoring skills gaps was to some extent facilitated by government agencies in Ireland and in Flanders. In the Netherlands and in Germany study programmes themselves had to monitor the trends regarding skills needs.

Study programmes felt largely responsible for employability of students; they considered it their job to link to the professional field. The professional field, however, was also seen to be responsible for the link with education; some employers and professional field organisation were more active than others. Tourism programmes stressed their responsibly in terms of creating links to the professional field and being aware of the developments in the sector, but stated they could not be held accountable for graduates finding employment. In contrast, the study programmes in the other two domains appear to be more comfortable saying that they are responsible and partly accountable. For another part, the difference between tourism and the other two domains might be real and reflected in the fragmented nature of the labour markets that tourism study graduates accessed.

7.5.2 / How do external stakeholders (employers and alumni) judge the connection between the labour market and the professional bachelors' study programme?

Questions about satisfaction with the link between study programmes and the professional field were asked to both study programmes and professional field organisations. **In engineering and in tourism, study programmes were of the opinion that the study programmes as well as the stakeholders were satisfied**. Also in social work/social care, the study programmes maintained that the stakeholders were satisfied. **Some social work/social care programmes mentioned, nevertheless, that employers did not yet embrace an academic orientation**. Programmes in social work/care appeared to have difficulty convincing the field of their added value, especially of their recent, more academic foundations. For instance, SW FL 1 pointed out that only after some years of experience with increased academic orientation of the bachelor's thesis, employers began to see the added value. These study programmes concluded that employers sometimes were not aware of their needs.

Study programmes that appeared to have extensive contacts with the professional field (INT TO NL 1, INT TO NL 2, INT TO FL 1, INT TO FL 2, INT TO DE 1) were satisfied with the role of employers. For them the experience led to **a virtuous circle of increasing contacts and satisfaction between programme and field**.

The need for a life-long learning attitude among students and graduates was stressed by professional field organisations. For instance, conversion programmes (on-campus or through

distance education) that exist in Ireland to retrain graduates for entry into the engineering sector might be expanded. Recognition of prior learning was also mentioned in this regard.

Methods employed to monitor stakeholders' satisfaction were mainly two: professional field surveys, and staying in touch with alumni. Alumni contact could take many forms, from informal (e.g. social media) to formal (e.g. alumni associations) and from infrequent to frequent (e.g. annual events).

7.6 / The place of employability in quality assurance

7.6.1 / Internal quality assurance

Self-evaluation reports were common, but content (e.g. statistical information) and frequency of analysis (more frequent internal quality assurance in addition to self-evaluation reports needed for accreditation procedures) differed per country, institution and study programme. **Self-evaluation reports could focus on employability, particularly if it was an aspect in mandatory accreditation procedures**. To retrieve employability information, most programmes had access to, or themselves collected, employability statistics.

How the internal quality assurance was arranged appeared to be influenced by the size of the institution, and by the requirements of the national framework of external quality assurance. Larger institutions had formalised procedures in this respect, for example for receiving feedback and input from the professional field and alumni. Smaller institutions used more informal methods. The coverage of what kind of feedback the programmes sought, differed. Thus, it was not yet common practice to monitor regularly in internal quality assurance whether international and national domain-specific intended learning outcomes were adequately reflected in programme-specific learning outcomes. Nor was it yet common practice to explicitly monitor if there was a performance gap between intended and achieved learning outcomes. Feedback from alumni on their own achieved learning outcomes was another important channel for knowledge about employability.

7.6.1.1 Good practices

An interesting practice regarding internal quality assurance was from study programmes that continuously reflected on input, process and results, and did so through documented PDCA cycles (EM FL 1, SW FL 1). Another interesting practice concerned one institution that identified 'excellent study programmes' based on the outcomes of internal and external quality assurance (ME NL 1).

7.6.2 / External quality assurance

The study programmes were largely satisfied with the current inclusion of employability in external quality assurance, although the practices and intensity of the focus differ per country. The study programmes did emphasise **that the focus in external quality assurance should not be solely on the employment outcome. Important should be what the study programmes had done to create linkages to the professional field, and the academic level actually achieved**. The suggestion to put more focus on other aspects than employment outcomes was particularly relevant for study programmes that educated for dynamic sectors with fluctuating labour market opportunities. Moreover, one study programme argued that there might be a need to **focus more on the quality of the learning *experience*, rather than on the learning *outcome*** (INT TO NL 2), especially given the fluidity of the employment situation at present. Some interviewees also suggested that slow procedures to adapt national standards (i.e. through centralised domain-specific learning outcomes) might hinder timely adjustment of study programmes to developments in the sector. Consequently, it was argued that external quality assurance should decrease its focus on procedures for incorporation of domain-specific learning outcomes and **rather review the ability of the study programme to adjust timely to developments in the sector** (INT TO NL 2). Such a shift in focus might be linked with the shift in external quality assurance from the focus on formal procedures to content on programme level.

The distinction between intended learning outcomes and the achieved ones is only made explicit in the national frameworks of the Netherlands and Flanders, although the emphasis in practice seems to be much more on achieved outcomes. Knowledge about achieved learning outcomes is crucial for recognition by professional bodies. The need for a study programme to apply an appropriate mix of channels to gain feedback about employability, e.g. through alumni or through direct contact with employers, is apparently not made explicit in external quality assurance.

7.7 / Conclusions

The report has highlighted many good practices of the interviewed study programmes and professional field representative bodies. We have shown that the programmes have many connections to the professional field, and work hard to attain and maintain these connections. The result is that the study programmes and professional fields appear to be satisfied with the employment results of graduates, which is not surprising as we selected study programmes known for their incorporation of employability. Important is, however, that the study programmes have chosen different strategies and approaches to reach this result. Of relevance in this respect are the study programmes' country, domain context and institutional characteristics.

The **country contexts** strongly influence the different phases discussed in this report. More specifically, in the input-phase, traditions, policies or authorised agencies influence the way study programmes receive input from the professional field, for example through domain-specific learning outcomes resulting from national consultative structures (the Netherlands) or having a particular focus on local employers (Germany). Similarly, in the process-phase the length and the number of internships and involvement of the professional field in examination appear to be linked to countries' traditions. The results-phase is influenced by the countries' economic performance, governmental policies and related job opportunities. Of importance are also countrywide commonalities in practices of collecting employment statistics (from national survey in the Netherlands, to some German study programmes not collecting statistics), as well as quantitative and qualitative labour market perspectives (for specific domains, both are collected on the national level in Flanders and Ireland). Study programmes' practices with respect to process management evaluation (e.g. annual self-evaluations to self-evaluation when required for accreditation) relate strongly to the different external quality assurance practices found in the four higher education systems.

Likewise, the **different study domains and the different labour markets** for which they educate strongly affect the different phases discussed in this report. Of relevance to the difference phases are:

- The diversity of the sector or sectors for which the study programmes educate: tourism graduates can find employment in many different tourism sectors and are also attracted to non-tourism sectors, whilst the sectors for mechanical engineers are less diverse. Relatedly, diversity in the sector can mean that there is not a single representative body that can be involved in determining (domain-specific) learning outcomes. Moreover, we found that tourism programmes have a stronger national and international focus as compared to the more local orientation of social work and mechanical engineering programmes. The three factors (diversity of the sector, representative bodies, and geographical orientation) influences the number of stakeholders that can or are to be approached to provide input to the study programmes' design.
- Dynamics of sectors influence the frequency with which (domain-specific) learning outcomes, and thus curricula, are to be updated. Highly dynamic sectors, such as tourism, change so rapidly that learning outcomes can easily become out-dated. Study programmes that carefully monitor trends and developments of the sector and adjust their set of intended learning outcomes accordingly ensure that the programmes remain relevant to the professional field. Consequently, study programmes that educate for dynamic sectors need to change their learning outcomes with a higher frequency, if they want to ensure employment opportunities for their graduates.
- Employment perspectives differ per domain. In all countries engineers were highly sought after. Consequently, engineering graduates have no problem finding employment. The situation is different for tourism and social work graduates. These graduates, particular the tourism graduates, might have search work in their field abroad, or search employment in sectors not directly linked to their studies. Important to note is that the employment perspectives for tourism and social work graduates differ per country.
- Cooperation among study programmes in similar domains. We found that study programmes in the social work/care domain appear to be cooperating closer than those in the other two domains studied. For example, we found strong cooperation in consultative structures leading to domain-specific learning outcomes (the Netherlands and Flanders) and involvement in each other's internal quality assurance processes (e.g. checking of graduation theses by external examiners in the Netherlands).
- The degree of accountability felt for employability of students. Tourism study programmes felt responsible, but stated they could not be held accountable for graduates finding employment. On the other hand, the study programmes in the other two domains appeared to be more comfortable saying that they are responsible and partly accountable. The diversity of sectors for which the study programmes educate might be one of the explanatory factors for the felt accountability.

How the different phases of the educational process in relation to employability are approached can also be related to institutional characteristics. Of relevance are:

- The size of institution and of the study programme in terms of number of students is the main factor that influences whether contact with the professional field is structured formally or more informally. Larges study programmes are more inclined to formalise contacts, whilst smaller and more regionally oriented programmes have informal contacts. Formalisation could affect the willingness of employers to participate. To counter this effect, we came across a number of solutions: study programmes appointing account managers or having increased attention for internship providers. The contact approach affects how the programmes get input for their study programmes, arrange education and examination, and evaluate employment and programme satisfaction results.
- The institution's location influences the number of available employment opportunities in the region.
- Related to the diversity of the sectors, we saw that programmes can have a stronger regional, national or international orientation.
- Institutional policies that prescribe the role and composition of study programmes' professional field advisory boards.
- The institution's profile influences the focus on particular learning outcomes or skills and attitudes. Examples are institutional priorities with respect to sustainability and entrepreneurship. Some study programmes mentioned, however, that the institution's profile was not (yet) translated into the current programme.

Influenced by aspects related to the country, domain and institutional characteristics are the **approaches study programmes can take to remain relevant** to society, the professional field and to students. The approaches are:

1. Broadening: e.g. inclusion of more general and transferable competences in terms of knowledge, skills and attitudes.
2. Specialising: e.g. offering elective specialisation modules.
3. Academic orientation: e.g. inclusion of more academic competences.
4. Professional orientation: e.g. inclusion of more vocational competences.
5. Geographical (regional, national or international) orientation: e.g. when regional employment perspectives were poor, attention in the input and process phase could shift to national or international employability.

The effects of these approaches on the employability of students are not straightforward at this point, and may involve trade-offs. For instance, broadening a programme's intended learning outcomes might increase the number of transferable skills, but could well come at the cost of sector-specific knowledge. Specialisation, on the contrary, can deepen students' competences in particular subjects, but these might not be the competences the labour market is in need of once current students graduate. Similarly, employers might not (immediately) see the added value of academic competences of graduated educated for practice-oriented sectors, as we noted in the social work sector. Lastly, employment perspectives, particularly in dynamic sectors, can change rapidly, meaning that a regional, national or international orientation might be relevant for graduates of a particular year, but not for graduates in subsequent years. To assess the combined effects of different approaches on employability of students more research is required.

Which of the five approaches study programmes choose is likely to change over time. Likewise, the employability-enhancing components in study programmes likely develop continuously. Our impression and that of the interviewed representatives of the quality assurance agency of the Netherlands and Flanders is that employability is embedded in study programmes better than, say, two decades ago. In the input-phase employability became more embedded in programmes' intended learning outcomes. In the process-phase there appears to be more interaction with the field especially in examination: e.g. professional field representatives involved in judging bachelor theses. Employability results become more visible through widespread systematic collection of statistics. Similarly, internal and external quality assurance incorporated employability aspects.

However, different higher education systems took different measures, resulting in varied intensity of attention to employability aspects. We do not want to advocate any one model; e.g. the Dutch approach with fairly systematic development of national domain-specific frameworks of learning outcomes need not be better or worse than the approach through professional field organisations (as in Ireland) or than the more individual programme activities (still) prevalent in Flanders and Germany (where initiative lies mostly with individual teachers). As discussed above, stressed should also be the diversity across domains (from stable as in engineering to dynamic, even turbulent, in tourism).

An aspect not very visible in our cross-sectional study has to do with timing: in Flanders, development of system-wide domain-specific learning outcomes is tied to the cycle of external evaluation, which partly explains the differences between fields noticed there.

With a view to the pace of processes to define domain-specific outcomes in relation to the dynamism of professional fields, it may be important to highlight the advantages of generic formulations of learning outcomes: the more specific they are, the more often they need to be readjusted. The opposite argument might be that the more generic learning outcomes are defined, the less certainty they give to curriculum design at the shop-floor level. The policy intention of learning outcomes as vehicles to stimulate a dialogue between study programmes and their professional field did not always come through in our interviews with representatives of study programmes.

Similarly, although learning outcomes were universally understood to include soft or generic skills, the competence of learning to learn, to stimulate graduates' preparedness for life-long learning, was not often prevalent, even though the professional fields stress the importance of life-long learning attitudes.

All things considered, study programmes and policy makers on system level are facing important challenges with respect to employability. Firstly, one can wonder if domain-specific learning outcomes are making the programmes largely uniform, leaving little room for differentiation and profiling. Secondly, the input-mechanisms are now mostly geared to the regional or domestic labour market (e.g. consultation of national professional field representative bodies). If international labour markets become more important, the currently used input-mechanisms might not be fit for purpose. Thirdly, study programmes have to take into account an increasing number of stakeholders and influencers, on a variety of levels. These stakeholders have different and sometimes conflicting demands, in which study programmes struggle to find the right balance (i.e. not everything can be included in a 180 or 240 ECTS programme). However, getting the balance wrong may have serious implications for the employability of students and the reputation of the study programme and its institution. Lastly, uncertainty caused by dynamics in sectors triggers study programmes to utilize different approaches. However, the actual effects of the approaches to the employability are currently ambiguous.

In closing, the interviewed study programmes have by-and-large a high regard for the employability of their students, though some more than others, which is largely related to the country, domain, and institution-specific contexts. The study programmes' employability-enhancing practices have been described in this report, which we hope will serve as inspiration to other study programmes interested in increasing the employability of their students. Furthermore, we hope to have shown different processes utilized to enhance employability. Although the processes reported here do not amount to an exhaustive list of options, they do point to what can be expected from professional bachelor programmes. These findings have implications for the institutional and programme specific external quality assurance reviews of professional bachelor programmes. Recommendations related to the implications are provided in our final chapter.

Chapter 8

Recommendations for stakeholders from observed good practices

In this chapter, we translate the good practices found during our study into recommendations for different groups of stakeholders in professional higher education. Since some recommendations address several stakeholders, we do not separate the recommendations into sections, but the following table gives a quick 'index' of where each might look.

Table 8.1: Recommendations for stakeholders from observed good practices

Stakeholder	Applicable recommendations
Governments	3, 18, 19, 22, 23, 24
Rectors' conferences	9, 18, 19, 22
Higher education institutions	1, 3, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 23, 24
Study programmes	1, 3, 4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24
Professional bodies/employers	3, 5, 8, 9, 10, 11, 13, 14, 15, 18, 19, 20, 21, 22, 23, 24
Quality assessment agencies	2, 14, 22, 23, 24, 25, 26

1. Make sure that the institutional profile is translated and visible in the study programmes' curriculum. For example, through a module on innovation and entrepreneurship.

2. Ask if and how the higher education institution profile has been translated into study programmes' curricula.

3. Monitor trends and developments in professional field sectors so that information on quantitative and qualitative labour market developments can be timely incorporated by study programmes.

4. Have a clear and comprehensive strategy to collect input from local, national and international professional field representatives. Make sure that the input is balanced (across different parts of the field), e.g.:
   a. Apply graduate or alumni surveys.
   b. Allow flexibility in the curricula to adjust to the latest insights. Monitor if learning outcomes desired by the professional field have been sufficiently included. When translating the field's input into curricula, do not lose sight of educational goals: professional education is more than tailor-made programmes for particular employers.
   c. Insight provided by teachers with professional experience is highly important in the input phase.

5. Study programmes not only receive input from the professional field, they can also provide information to the field. For example, about chances in the higher education system and sharing their insight in developments in the sector.

6. Informal contacts with the professional field might be of equal value as formalised or structured contacts. Consider which approach is best for your institution and programme.

7. Allow study programmes educating for dynamic markets to adjust their curricula with more flexibility than programmes in more stable fields.

8. Professional field organisation should make linking with education part of their mission.

9. Consider methods through which teachers can gain connections or re-connect with the professional field, e.g. through teacher-internships and exchanges with similar study programmes abroad.

10. Teachers that go on internship visits should also seek general input and feedback on the study programme. To monitor the intensity of contacts and supplied input and feedback, company visit results can be registered in a central database for the whole study programme.

11. Employers can be involved in specialisations not (yet) offered by study programmes. They can do so by offering elective modules themselves. Similarly, the expertise of external parties can be used to teach competencies for which the in-house knowledge in the study programme is insufficient. Examples include usage of guest lecturers for specific subjects in the curriculum, and of employment agents to provide job interview training.

12. Specialisations and excellence tracks in the curriculum can be beneficial to participating students. An example is to allow students to work on a small business project instead of going on an internship.

13. Think of ways in which the professional field can be actively involved in examination. Students can be encouraged by awards (e.g. sponsored flight tickets). Involvement can be broader than assessment of internship periods and company projects; also e.g. project work and role-play assessment.

14. Most interviewed study programmes aimed to enhance their internationalisation. When doing so programmes might consider if the current learning outcomes are equally relevant to international students. Special initiatives to enhance the employability of international students are not common, but could contribute to this end. An example is an office that supports international students to find employment in the host country.

15. Inform internship-hosting organisations clearly and continuously on what is expected from them and from the students. If internship providers cannot or do not meet the expectations, consider discontinuing the cooperation.

16. Ensure that the learning outcomes of modules and internship periods are made clear to students. Explain how the learning outcomes relate to the professional field.

17. Study programmes can utilize alumni to enhance connections with the professional field and to generate awareness of trends and developments. Alumni can also offer valuable insights into the field and provide feedback to the study programmes. Examples to enhance connections with alumni include: alumni associations, alumni events, online alumni groups (e.g. Facebook, LinkedIn).

18. Although competition can be a strong incentive for study programmes to perform, cooperation might enhance quality, too. Through cooperation study programmes can pool insights, experiences, and they can exchange ideas on learning outcomes.

19. Consider that internationalisation might have an effect on the number of student interested in doing an internship in the region.

20. When study programmes become broader, it is important to prepare students for life-long learning: not all that is needed can be taught by study programmes in the limited time they have available.

21. Relevance of graduation theses can be improved by asking external or internal experts to advise on available topics. Thesis topics could focus on 'what keeps entrepreneurs awake at night' (INT TO NL 2).

22. Some professional bachelor programmes change their orientation by including more research modules and projects. This development might influence the direction of professional higher education, and how graduates operate in their professional practice; employers may not be adjusted to such changes and would need to be informed of graduates' new competencies.

23. Statistical data on employment outcomes is essential for stakeholders to get insight into the performance of graduates and study programmes. Information on employment can also be collected through qualitative methods. Monitoring of employment (statistics) and having a professional field surveys should be an integral part of internal quality assurance.

24. The satisfaction of the professional field with graduates' performance is important. Study programmes should collect such information. Collection of the needed data can be organised by higher education institutions, the professional field or government.

25. The current focus on employability in external quality assurance is positive, but needs a diversified approach. It may be more relevant to focus on what programme do to create linkages with the professional field for enhanced employability, rather than focus on the employment outcomes.

26. External quality assurance along the lines of centrally negotiated, fairly detailed national standards for study programmes might not be the best approach in dynamic markets, as desired learning outcomes change more rapidly than national standards can be adjusted. Therefore, the level of abstractness of formulated requirements, criteria and expectations should be brought in line with the practices of the study programmes, to allow flexible adaptation within broadly defined learning outcomes.

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Appendix I Abbreviations

BBA	Bachelor of Business Administration
EHEA	European Higher Education Area
EM	Electromechanical engineering
FL	Flanders
HEI	Higher education institution
IE	Ireland
IoT	Institute(s) of Technology
ME	Mechanical engineering
NL	the Netherlands
NQF	National Qualification Framework
NRW	North Rhine-Westphalia (Germany)
NVAO	The Accreditation Organisation of the Netherlands and Flanders
PBL	Problem Based Learning
PDCA	Plan Do Check Act
PF	Professional field
QA	Quality assurance
SC	Social care
SER	Self-evaluation report
SME	Small and Medium Enterprises
SW	Social work
TO	Tourism
TRIS	Transnational Institutional Cooperation
USP	Unique Selling Point

Appendix II

Questionnaires ProBE study

Experts from quality assurance agencies

who have insights into the role of employability in external quality assurance; per country (i.e. 4 interviews).

Input: how is the translation of domain-specific learning outcomes to study programmes organised?

1. Are there national guidelines with respect to:
   a. The degrees to which professional bachelors' study programme's learning outcomes need to reflect domain-specific learning outcomes?
   b. The methods/mechanism used to attune the learning outcomes of professional bachelors' study programmes to the professional field? (e.g. availability and usage of national learning outcomes frameworks and involvement of employers and/or professional field advisory boards)

2. Are these guidelines enforced in the external quality assurance by your quality agency?

3. How much room is there for local/regional adaptation of national learning outcomes?
   a. Do study programmes X and Y use the room for local adaptations adequately? [or if limited knowledge of the cases, the professional bachelors' study programmes in general]
   b. Are the cases X and Y different from other programmes [looking for good practices]?

4. In your view, do the professional bachelors' study programmes X and Y take the professional field into account? [or if limited knowledge of the cases, the professional bachelors' study programmes in general]
   a. Are the cases X and Y different from other programmes [looking for good practices]?

Process: how is the link between study programme and professional field arranged in the education and examination?

5. Are there national guidelines to enhance the link between study programmes and professional fields in education and examination?

6. Is it for professional bachelor programmes to receive accreditation mandatory to show their link with the professional field, through – for example – inclusion of internship/work placement in the curriculum?

7. Overall, do you think that the by employers/professional field learning outcomes are reflected in the study programmes' curricula?

8. Thinking of other (national) agencies, are there (national) initiatives to enhance the employability of graduates? (e.g. the Higher Education Achievement Report in the UK)

Results: what are the results of the 'input' and 'process' in terms of employability?

9. According to you, what are the results of the professional bachelor programmes X and Y in terms of graduate employability, compared with other study programmes in the same field? [or if limited knowledge of the cases, the professional bachelors' study programmes in the specific field of study compared with professional bachelors' study programmes in other fields]

10. Are there study programme specific employment statistics/information available, and if so, can you share them? (E.g. percentage that found employment, needed search time between graduation and employment, job satisfaction surveys etc.)

11. Is the employability of students evaluated during the study programme and/or after graduating from the study programme? And if so, is the evaluation done by the study programme, the institutions, sector specific survey or through a national survey?

12. To what extent do you think that the study programmes/higher education institutions can be held accountable for the employability of their graduates?

13. Based on your answer on the questions above, how do you judge the connection between the labour market and the professional bachelors' study programmes X and Y? [or if limited knowledge of the cases, the professional bachelors' study programmes in general]
   a. Do you see any possibilities for further improvement in X and Y?

Process management and evaluation: what is the role of employability in the quality assurance?

14. Are there national guidelines to enhance and facilitate the connection between the stakeholders (employers) and professional bachelor programmes and is the connection sufficiently embedded in the internal and external quality assurance?

15. Do the external quality assurance reports of the study programmes or institutions include employability factors, and if so, which?
    a. Do you see any possibilities for further improvement in the inclusion of employability in external quality assurance?

Conclusion

16. Overall, do the study programmes take the professional field into account sufficiently, in your view?
    a. Do you see any possibilities for further improvement?

17. Overall, which best practises undertaken by institutions, study programmes or other actors to enhance employability of graduates do you see?

Experts from study programme consultative structures on system-level

who have insights into domain-specific learning outcomes and the methods and mechanisms used to implement these learning outcomes into study programmes and higher education institutions. This group includes representatives of employer organisations and/or professional field advisory boards; per country and per area of study.

Input: how is the translation of domain-specific learning outcomes to study programmes organised?

1. [if not found through desk research] Has the professional field in which you are active, collectively described the domain-specific learning outcomes?
    a. Do the domain-specific learning outcomes reflect the interest of both the smaller and larger companies you represent?
    b. Are there domain-specific learning outcomes specifically for international students?

2. Are these domain-specific learning outcomes reflected in the study programme specific learning outcomes of the cases X and Y selected for our study? [or if limited knowledge of the cases, reflection of domain-specific learning outcomes in the study programme specific learning outcomes in general]

3. Which methods and mechanisms are used to implement the domain-specific learning outcomes into study programmes and higher education institutions, in our cases X and Y in particular, but also in other cases [we are looking for good practices]?

4. Does your employer organisation and/or professional field advisory board have a role in the translation of domain-specific learning outcomes to study programmes?

5. Do the study programmes adjust the domain-specific learning outcomes to the institutions' profile and local context?
    a. Is there link to the region and local innovation initiatives / policies?

Process: how is the link between study programme and professional field arranged in the education and examination [of cases X and Y]?

6. Is your employer organisation and/or professional field involved in the education process, and if so, in what way(s)?

7. Is your employer organisation and/or professional field involved in the examination process, and if so, in what way(s)?

8. Overall, do you think that the by employers / professional field desired learning outcomes are reflected in the study programmes' curricula?

9. Are you aware of (other) good practises with respect to the link between study programme and professional field in terms of education and examination?

Results: what are the results of 'input' and 'process' in terms of employability?

10. According to you, what are the results of the professional bachelor programmes in terms of graduate employability?
    a. Do cases X and Y achieve a better graduate employability in comparison with similar professional bachelor programmes?

11. [if not found through desk research] Are there study programme specific employment statistics / information available, and if so, could you please share them? (E.g. percentage that found employment, needed search time between graduation and employment, job satisfaction surveys etc.)

12. Is your employer organisation and/or professional field involved in evaluating the employability of students during the study programme and / or after graduating from the study programme? And if so, is the evaluation done through a national survey, a sector specific survey or done by individual study programme and/or the institutions?

13. To what extent do you think the study programmes / higher education institutions are accountable for the employability of their graduates?

14. Based on your answer on the questions above, how do you judge the connection between the labour market and the professional bachelors' study programmes X and Y? [or if limited knowledge of the cases, the professional bachelors' study programmes in general]
    a. Do you see any possibilities for further improvement [in X and Y]?
    b. In your opinion, are the learning outcomes learned in the study programmes [X and Y] very specific for the labour market needs or are the learned learning outcomes broader and exceed the sector specific labour market needs?

Conclusion

15. Overall, to what extent do the study programmes [X and Y] take the professional field into account, in your view?
    a. Do you see any possibilities for further improvement?

16. Overall, which best practises undertaken by institutions, study programmes or other actors to enhance employability of graduates do you see?

Experts from study programmes and higher education institutions

who have knowledge about the role of employability in education, examination and internal quality assurance; per country and per study programme (i.e. 4x3x2 interviews).

Overall, employability graduates

1. Your study programme has been selected for this study for its known enhancement of employability of graduates, which factors have contributed to this achievement and what are your good practices?

Input: how is the translation of domain-specific learning outcomes to study programmes organised?

2. Did the professional field collectively describe the domain-specific learning outcomes?

3. Are these domain-specific learning outcomes translated in the study programme specific learning outcomes?

4. With which methods and mechanisms are the intended learning outcomes of your professional bachelors' study programme attuned to the professional field? (e.g. professional field advisory boards and usage of national qualifications frameworks)

5. Did the employer organisations and/or professional field advisory boards have a proactive role in this process?

6. Did your study programmes adjust the domain-specific learning outcomes to the institutions' profile and local context?
    a. Is there link to the region and local innovation initiatives / policies?

Process: how is the link between study programme and professional field arranged in the education and examination?

7. Are the employer organisations and/or professional fields involved in the education process, and if so, in what way? (e.g. guest lectures, teachers with professional and practical experience, internships / work placements / job or work shadowing, and learning method / problem based learning)

8. Are the employer organisations and/or professional fields involved in the examination process, and if so, in what way? (e.g. external examiners)

9. Which other methods or tools are used to link the study programme to the professional fields in terms of employability? (e.g. (soft) skill development in the curriculum or separate workshops, facilitating entrepreneurs, network opportunities/access, employer fairs, recognition of extracurricular activities, international opportunities, language modules and mentoring/coaching)
   a. Are there initiatives to enhance the employability of international students in the local labour market?
   b. Are the domain-specific and study programme specific learning outcomes different for this target group, and if so, was the professional field involved in this?

10. Overall, do you think that the learning outcomes desired by the employers in the field of study are reflected in the study programme's curriculum?

11. Are you aware of (other) good practises with respect to the link between study programme and professional field in terms of education and examination?

Results: what are the results of 'input' and 'process' in terms of employability?

12. According to you, what are the results of the professional bachelor programmes in terms of graduate employability?
   a. Do cases X and Y achieve a better graduate employability in comparison with similar professional bachelor programmes?

13. Are there study programme specific employment statistics/information available, and if so, can you share them? (E.g. percentage that found employment, needed search time between graduation and employment, job satisfaction surveys etc.)

14. Is the employability of students evaluated during the study programme and/or after graduating from the study programme? And if so, is the evaluation done by the study programme, the institutions, sector specific survey or through a national survey?

15. To what extent do you think the study programme/higher education institution is accountable for the employability of its graduates?

16. Based on your answer on the questions above, how do you judge the connection between the labour market and the professional bachelors' study programme?
   a. Do you see any possibilities for further improvement?

Process management and evaluation: what is the role of employability in quality assurance?

17. [if not found through desk research] Does your study programme or institution make self-evaluation reports, and can you share them?

18. Do the self-evaluation reports of the study programmes or institution include employability factors, and if so, which?

19. Are there other ways in which the internal quality assurance evaluates the employability aspects of the study programme and its graduates?

20. Does your study programme or institution have external quality assurance reports, and could you please share them?

21. Do the external quality assurance reports of the study programmes or institutions include employability factors, and if so, which?
   a. Do you see any possibilities for further improvement in the external quality assurance in terms of employability?

Conclusion

22. Overall, to what extent does your study programme take the professional field into account, in your view?
   a. Do you see any possibilities for further improvement?

Appendix III

Interviewed organisations and study programmes

a. Experts in quality assurance agencies

who have insight into the role of employability in their external quality assurance arrangements.

Country	Organisation	Code in text
Netherlands	NVAO	INT QA NL
Flanders	NVAO	INT QA FL
Germany	AQAS	INT QA DE
Ireland	QQI	INT QA IE

b. Experts from consultative structures on system-level

who have insight in domain-specific learning outcomes in the selected areas, and in the methods and mechanisms used to implement these learning outcomes in study programmes and higher education institutions. This category included representatives of employer organisations and/or professional field advisory boards.

Country	Field	Organisation	Code in text
Netherlands	Mechanical engineering	Vereniging FME-CWM	INT PF ME NL
	Social work	NVMW, Nederlandse Vereniging voor Maatschappelijk Werkers	INT PF SW NL
	Tourism	ANVR, Algemene Nederlandse Vereniging van Reisondernemingen	INT PF TO NL
Flanders	Mechanical engineering	Voka, Vlaams netwerk van ondernemingen	INT PF ME FL
	Social work	-	
	Tourism	Toerisme Vlaanderen	INT PF TO FL
Germany	Mechanical engineering	-	
	Social work	-	
	Tourism	-	
Ireland	Mechanical engineering	Engineers Ireland	INT PF ME IE
	Social work	CORU - Regulating Health and Social Care Professionals	INT PF SW IE
	Tourism	-	

c. Experts within study programmes and higher education institutions

who have knowledge of the role of employability in education, examination and internal quality assurance.

Country	Field	Institution	Code in text
Netherlands	Mechanical engineering	Windesheim (Zwolle)	INT ME NL 1
		Avans Hogeschool (Breda)	INT ME NL 2
	Social work	Christelijke Hogeschool Ede	INT SW NL 1
		HZ University of Applied Sciences (Vlissingen)	INT SW NL 2
	Tourism	NHTV internationaal hoger onderwijs Breda	INT TO NL 1
		Saxion (Deventer)	INT TO NL 2
Flanders	Electro mechanics	Thomas More Kempen (Geel)	INT EM FL 1
		Artesis Plantijn Hogeschool Antwerpen (Boom)	INT EM FL 2
	Social work	Katholieke Hogeschool Leuven (Heverlee)	INT SW FL 1
		Hogeschool Gent	INT SW FL 2
	Tourism	Hogeschool West-Vlaanderen (Kortrijk)	INT TO FL 1
		Thomas More Mechelen (Mechelen)	INT TO FL 2
Germany	Mechanical engineering	Fachhochschule Südwestfalen (Soest)	INT ME DE 1
		Hochschule Niederrhein (Krefeld)	INT ME DE 2
	Social work	Fachhochschule Köln	INT SW DE 1
		Fachhochschule Münster	INT SW DE 2
	Tourism	Internationale Hochschule Bad Honnef – Bonn (Bad Honnef)	INT TO DE 1
		International School of Management (Dortmund)	INT TO DE 2
Ireland	Mechanical engineering	Institute of Technology Sligo	INT ME IE 1
		Letterkenny Institute of Technology	INT ME IE 2
	Social care	Institute of Technology Tralee	INT SC IE 1
		Dundalk Institute of Technology	INT SC IE 2
	Tourism	Cork Institute of Technology	INT TO IE 1
		Galway-Mayo IT	INT TO IE 2

Colophon

2014

Employability of professional bachelors from an international perspective

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