



Lifelong Learning Programme



WORK BASED LEARNING
AS INTEGRATED CURRICULUM



Education, Audiovisual & Culture
Executive Agency

Work Based Learning as an Integrated Curriculum (WBLIC)

Mini-Conference Pack

Case Study Summaries

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1 SPAIN: MASTERS IN INNOVATION AND DEVELOPMENT OF BUSINESS PROJECT

Organisation: Florida Universitaria in association with Universitat de València)

Country: Spain

Field of Study: Business

Background Information	Florida Universitaria forms part of a worker cooperative or production cooperative and plays the role of a training centre. Its members are companies situated in and around the region of Valencia. Florida Universitaria is not a traditional university but a private training centre, and the degrees awarded are official degrees of the Universitat de València and Universitat Politècnica de València.
Market Need	<p>The Valencian Business Confederation (CEV), a consortium of several Valencian companies and associations, identified the need for a course in innovation management tailored to the needs of employers within the Valencia region. There is demand for trained individuals who are able to lead innovation processes and to monitor the development of innovative business projects.</p> <p>As a result of the economic crisis, preparing students for self-employment has become an increasingly important aspect of the programme.</p>
Curriculum Planning	<p>Governed by Spanish Universities Regulations.</p> <p>All university degree programmes must be approved by all University Governor Councils and accredited by the Verification Agency (ANECA).</p> <p>Curriculum planning is undertaken on a collaborative basis through a partnership between Florida Universitaria and CEV.</p>
Curriculum Design	The design of the curriculum was developed cooperatively by Florida, CEV, and academic staff from the university's Economic and Business Faculty. A consultation process was carried out to include the views of stakeholders (managers, professional bodies).

	<p><i>Modular structure</i></p> <p>The programme consists of core five modules and two further optional modules.</p>
Delivery	<p><i>Programme format</i></p> <p>Combination of block delivery (2 days – Friday/Saturday), seminars, and a real business project developed within the company. This project, which also forms the basis for the Master's thesis, is developed throughout the entire course (rather than being undertaken towards the end). This format allows students to combine professional activity with class attendance. Attendance of 80% of classes is obligatory.</p> <p><i>Learner support</i></p> <p>Each student is assigned a personal tutor (Senior Advisor), with no more than two students assigned to one tutor. This tutor also acts as the Master's thesis supervisor. A maximum of 25 students are admitted to the programme per year.</p> <p>Additionally, each student is assigned a company tutor who provides professional support for the project and acts as a 'link' between the company and the Senior Advisor.</p> <p>The Advisory Board, which consists of experts from the field of business development, supports the student in project planning and monitors project progress.</p> <p><i>Teaching staff</i></p> <p>Academic staff account for 33 per cent of teaching staff, while professionals account for the remaining 66 per cent.</p>
Student Assessment	<p>Formative and summative.</p> <p>Continuous student assessment includes assessment of the student portfolio (electronic and paper-based) and participation in class.</p>

	Final assessment includes: exams, Master's thesis, Senior Advisor report, and company tutor report.
Course Evaluation	Evaluation procedures are in place to analyse the levels of satisfaction of students, companies and graduates. Furthermore, there are established processes to measure graduation and dropout rates and evaluate feedback from the Advisory Board.
Critical Success Factors/ Good Practice	<p><i>Market need</i></p> <p>Awareness of market needs: Due to its position inside the cooperative, Florida Universitaria is well aware of current market needs within the region.</p> <p><i>Curriculum design</i></p> <p>Flexibility: The programme can be quickly adapted to respond to changing needs, e.g. changes due to the economic crisis.</p> <p><i>Delivery</i></p> <p>Advisory Board: external experts are directly involved in monitoring and assessing the projects.</p> <p>Personal tutors: to optimise learner support.</p>
Challenges	<p><i>Curriculum planning</i></p> <p>Lengthy development process: a result of the extensive accreditation process required by the Spanish Universities Regulations.</p> <p>Universities' resistance: Universities initially resisted the idea of a Masters level programme being delivered at a private training centre.</p> <p>Ratio of academic teaching staff: The ratio of academic teaching staff (PhD) had to be increased in order to comply with Spanish regulations.</p>

Delivery

Companies: As a result of the economic crisis, an increasing number of students and graduates are unemployed. Therefore, companies that are willing to participate and accommodate students in developing their projects are required for the programme to be successful.

2 AUSTRIA: BACHELORS IN SOCIAL WORK

Organisation: 'Campus Wien' University of Applied Sciences

Country: Austria

Field of Study: Social Work

Background Information	<p>Study programmes in Social Work are currently very popular among students in Austria. In addition to this programme, there are seven other study programmes in Social Work offered at Universities of Applied Sciences across Austria.</p>
Market Need	<p>Societal changes generate problems in a number of different fields, which require the application of social work support – e.g. poverty due to rising unemployment, tensions between ethnic groups, child protection services. These are both traditional and new areas of social work. The bachelor's programme in Social Work is designed to provide a basic overview of the different fields of social work, and to deliver specific insight into different working concepts of social work.</p> <p>There is a shortage of Social Work graduates in Austria. Institutions for social work actually require more graduate-level employees, but the tight financial conditions in the field results in many graduates being employed in unpaid practical phases and on part-time contracts. The study programme was not only created on the basis of labour market needs, but also to assist in the academic development of the nascent discipline of social work.</p> <p>Admission is highly competitive: out of approximately 600 candidates who apply for a place each year, only 156 will finally be admitted to the programme.</p>
Curriculum Planning	<p>Many institutions in the field contributed to the development of the study programme. The bachelor's programme can be described as "generalised" basic education in social work with several practical integration phases.</p>

	<p>As it is the case for all universities of applied sciences (UAS) in Austria, curriculum planning for the programme must be carried out by a so-called curriculum development team.</p>
Curriculum Design	<p>The programme is structured into modules, with each module focussed on a specific field of social work. The programme can be described as 'generalised' basic education in social work with several practical integration phases.</p>
Delivery	<p><i>Practical training</i></p> <p>Students must complete three phases of practical training throughout their studies (of two, four, and fourteen weeks respectively). The three different phases of training must be undertaken within different institutions, and ideally also relate to different fields of social work. They are accompanied by reflective courses which help students to integrate individual experiences into the programme.</p> <p>Classroom work also addresses many aspects of work-based learning, for example through the use of case studies and practical examples, and also team teaching.</p> <p>The majority of teachers have practical professional experience of social work – either from a previous (full-time teachers) or a current (part-time teachers) job.</p>
Student Assessment	<p>Takes place through module exams (prepared via a communication process that includes all teachers) and a case-based final exam.</p> <p>Students must complete a reflective report at the end of each practical training period.</p>
Course Evaluation	<p>Course evaluation is undertaken through several different communication processes between students, teachers, higher education institutions, practical tutors, and companies – ranging</p>

	<p>from individual communications to structured feedback through questionnaires.</p> <p>Occasional surveys are conducted among alumni to obtain more information about their professional development and careers.</p>
<p>Critical Success Factors/ Good Practice</p>	<p><i>Market need</i></p> <p>Selection of students: A large surplus of applicants that far exceeds the number of available places, and a well-established application procedure ensure that a highly motivated and engaged group of students is selected.</p> <p><i>Delivery</i></p> <p>Body of teachers: team of full- and part-time teachers, who establish a culture of case-oriented teaching and use relevant practice examples.</p> <p>Practical training in different fields: Three practical phases in different fields of social work, accompanied by reflection phases at the university, support students in making well-informed choices about the field of social work they will specialise in during the study programme.</p>
<p>Challenges</p>	<p><i>Delivery</i></p> <p>Need for a highly established and efficient information system: due to the large number of students, divided into many small groups.</p> <p>Coordination of placements: The large number of work placements often creates problems in terms of coordination.</p> <p>Coordination between teachers within modules: is considered crucial in order to provide students with a basic common level of knowledge and understanding.</p>

3 ENGLAND: WORK BASED AND INTEGRATIVE STUDIES (WBIS) (UNDERGRADUATE & POSTGRADUATE)

Organisation: University of Chester

Country: England

Field of Study: Various

<p>Background Information</p>	<p>For over 20 years the University of Chester has been adopting approaches to curriculum development that involve developing the means to accredit learning in and through the workplace. Work Based and Integrative Studies (WBIS) was first validated in 1998 and is one of the oldest negotiated WBL frameworks in the UK.</p>
<p>Market Need</p>	<p>WBIS allows for the design and delivery of work-based learning that range from individualised negotiated learning programmes (individual routes), to corporate programmes of learning (corporate routes), which are developed and designed in collaboration with individual employers and groups of employers. WBIS is also used by employers to undertake accreditation of their in-house programmes ('co-delivery').</p>
<p>Curriculum Planning</p>	<p>WBIS is a framework comprised of two programmes – the postgraduate modular programme and the undergraduate modular programme. These programmes provide an accreditation mechanism for work-based and work-related learning. The programme is overseen and managed by the University's Centre for Work Based Studies (CWRS).</p>
<p>Curriculum Design</p>	<p>Though WBIS is an accreditation framework, specific pre-validated modules have been produced for the programmes within the framework (e.g. 'Self Review and Negotiation of Learning', 'Skills and Approaches for Work Based Learning', 'Work Based Research Methods', 'Exit Review and Forward Planning').</p> <p>In WBIS the student forms an individual pathway of learning. This is done by looking at Accreditation of Prior Learning that is relevant.</p>

	<p>A range of 'shell' modules can be selected for a programme of study. Bespoke modules can be developed in line with employer interests. The University's <i>WBIS Approval Panel</i> meet every month to approve new customisations of the WBIS taught work-related modules.</p>
<p>Delivery</p>	<p><i>Example: Programme developed with the UK's Forum of Mobility Centres</i></p> <p>The Forum sought to devise an education programme through WBIS to meet their needs. The 'Forum of Disability Centres (UK) Education Programme' consists of three core modules, largely shaped by the day-to-day work processes of the business of the Forum. Employees begin the programme when it suits them and they are not required to rigidly follow an academic year.</p> <p><i>Self-directed learning</i></p> <p>The philosophy of the programme is one of self-directed learning, allowing participants to explore areas of professional interest.</p> <p><i>Individual Learning Agreement and PATs</i></p> <p>All students have an 'Individual Learning Agreement' which is negotiated by personal academic tutors (PATs), and approved at their team meeting every month.</p>
<p>Course Evaluation</p>	<p>Evaluation is undertaken through module feedback, workshop feedback forms, internal monitoring processes, and staff-student committees (one per month). A management group oversees WBIS corporate programmes.</p> <p><i>'Exit review and forward planning' module</i></p> <p>This module, developed by Chester together with several other institutions, is usually taken by students at the end of their WBIS studies and encourages them to reflect on their programme of study as a whole - on what worked well and what did not. This is perceived to be a useful evaluation mechanism.</p>

<p>Critical Success Factors/ Good Practice</p>	<p><i>Market need</i></p> <p>Flexibility: Ability to respond to employer needs for flexibility in a timely manner.</p> <p>Tailored curricula: Ability of Higher Education to listen to employer requirements and develop a curriculum which accommodates them.</p> <p><i>Curriculum planning</i></p> <p>Support structure: A support structure for WBIS that is large and substantial. The Centre for Work Related Studies (CWRS) is viewed as a 'mini university', sitting as a central function of the institution.</p> <p><i>Curriculum design</i></p> <p>'Shell framework': WBIS offers a 'shell framework' which is used by Chester to plan and manage workforce development (i.e. where an enterprise requires specific developmental interventions) or individual students in employment.</p> <p><i>Delivery</i></p> <p>CWRS staff: Successful delivery is determined by the quality of the staff developing and delivering the curriculum – staff that understands WBL and reflective practice and the methodologies behind this are crucial to success.</p>
<p>Challenges</p>	<p><i>Delivery</i></p> <p>It remains difficult for WBIS to operate in an organisation geared towards delivery of three-year undergraduate courses/programmes, and with systems and procedures which are primarily used for static (mid-late September) timeframes.</p>

4 POLAND: BACHELOR OF ARTS IN APPLIED INFORMATICS

Organisation: Cracow University of Economics (CUE)

Country: Poland

Field of Study: Computer sciences/Business

Background Information	The Cracow University of Economics (CUE) is one of the largest business schools in Poland, and it was the first higher education institution in Poland to introduce studies in English. 21,000 students are currently enrolled at CUE.
Market Need	<p>The programme was developed by CUE in response to the shortage of qualified IT specialists in the Polish labour market, specifically the deficit of individuals with combined informatics and business competencies. It is supported by ESF funding via Education for Entrepreneurship Association (EdP).</p> <p>The rapid development of the IT market over the last decade led to an unexpected demand for IT professionals. The need for IT experts is particularly pronounced in the Malopolska region, where a large proportion of Polish IT companies are located.</p>
Curriculum Planning	<p>Governed by CUE guidelines and in collaboration with EdP following the guidelines of the University.</p> <p>The programme was developed in collaboration with Regional Authorities and was subject to approval by the Faculty of Management Council at CUE, and the Ministry of Science and Higher Education. The programme was accredited in 2009.</p> <p>In addition, an Applied Informatics Faculty was created at CUE.</p>
Curriculum Design	In 2008, a programme development team was established to develop a new study programme tailored to the needs of the labour market. Given the fact that IT experts were (and still are) in great demand, especially when they have also specialised in management, finances, administration, production or logistics, the curriculum needed to cover modern computer science tools, techniques, and business processes.

	<p>The curriculum was designed in cooperation with representatives from potential employers (mostly IT companies) who provided input through panel discussions.</p> <p>The curriculum accounts for three years of study (6 semesters).</p>
<p>Delivery</p>	<p><i>Programme format</i></p> <p>Combination of lectures, practical classes, group and individual activities, discussions, workshops, case study analyses, and the use of guest speakers and industry experts. In addition, there are mandatory work placements and optional 'periods of probation' for students within companies. The work placement must comprise 120 hours, with the focus topic negotiated individually for every student at the beginning of the placement. The 'periods of probation' within companies comprise 192 hours and are available only to the best 20 per cent of third-year students. The final two semesters are dedicated to the dissertation which includes a work-based project.</p> <p>For students who have insufficient mathematical skills, the programme offers additional compensatory training in mathematics.</p>
<p>Course Evaluation</p>	<p>Formative and summative evaluation to collect the feedback of students and employers. Student feedback relates to the quality of the modules (lecturers, teaching methods, etc.) and is obtained through anonymous surveys. Potential employers from the Malopolska region are invited to participate in panel discussions where the curriculum is discussed and their views solicited. Feedback from both groups is used to further the development of the curriculum. The programme is assessed by an external partner.</p>

<p>Critical Success Factors/ Good Practice</p>	<p><i>Market need</i></p> <p>Cooperation with enterprises: Through the creation of the new Applied Informatics Faculty, the CUE intended to initiate close cooperation with enterprises.</p> <p><i>Curriculum design</i></p> <p>Practical approach: The programme distinguishes itself from other IT programmes in the way it combines delivery of IT skills with business skills, and in the fact that it adopts a very practical approach.</p>
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5 ENGLAND: POSTGRADUATE DIPLOMA/MASTERS IN STRATEGIC COMMUNICATION

Organisation: Leeds Metropolitan University
 Country: England
 Field of Study: Journalism, Media studies and Communication

Background Information	<p>The National Health Service (NHS) is the largest employer in the UK, and with 1.7 million employees it also is the fourth largest employer in the world. 3,000 professional communicators are employed within the organisation.</p>
Market Need	<p>Large public sector employer (NHS) requiring a programme to develop higher level skills in a specific occupational group (Public Relations and Communications). In response to the demands of a vision which saw the NHS as a 'World Class Health Service', the organisation sought to benchmark their communications functions and build capacity and capability to deliver this vision.</p>
Curriculum Planning	<p>Governed by University guidelines. The programme adopts in full the principles laid out in the Leeds Metropolitan University Faculty of Business and Law Postgraduate Scheme. The programme is designed in accordance with National Quality Assurance Agency guidelines</p> <p><i>Rigorous approval processes</i></p> <p>Approving a programme based on principles of co-production which can only provide indicative content is unusual. The programme development team has to provide significant assurance that the programme learning outcomes were of a Master's level and were in accordance with national and University benchmarks.</p> <p><i>Entry requirements</i></p> <p>The programme is only available to people who are currently employed by the NHS. Students are normally expected to possess</p>

	a first degree in any subject plus a minimum of one year's Communication/Public Relations work experience.
Curriculum Design	<p>Co-created by the course team and employees at various levels of the NHS. Curriculum design was shaped by several imperatives: the need for flexibility to accommodate any new and emerging priorities in communication; the need for the programme to be delivered in manageable blocks; and requirement that assessments should support work activity and be integrated into the work context.</p> <p><i>Course structure</i></p> <p>The eighteen month course is comprised of three stages. Stage two consists of a series of Master classes, with the topics being negotiated during the course with students' contributions. Stage three is a work-based project, individually negotiated with the course tutors and directly relevant to the student, e.g. a piece of research, a project, a service development, or a cross-departmental initiative.</p>
Delivery	<p>Combination of block delivery (three days), Master classes, and dissertation delivered off-site.</p> <p><i>Delivery methods</i></p> <p>The strategy is based on a mix of intensive teaching, mini-lectures, group and individual activities, facilitative discussion, workshops, case study analysis, and the use of guest speakers and industry experts.</p> <p><i>Employer-university liaison</i></p> <p>Regular contact (every two months) with the employer to review the delivery and impact of the programme.</p>
Student Assessment	<p>The assessment strategy incorporates a variety of methods seen as appropriate to the learning outcomes of each module.</p> <p>They include reflective learning journals, presentations, long and short assignments, work-based learning projects, and assessed tasks.</p>

Course Evaluation	Formative evaluation: student feedback was gathered at the end of each module to enable fine-tuning of delivery. Further summative evaluation was informed by feedback from senior managers within the NHS to assess the extent to which the programme had benefited individual students and the organisation.
Critical Success Factors/ Good Practice	<p><i>Market need</i></p> <p>Employer' willingness to invest time to engage with Higher Education and discuss and formulate requirements.</p> <p>HE expertise: Need for a small cadre of professionals who can negotiate with employers, understand quality assurance requirements, and construct a course that satisfies both parties.</p> <p><i>Curriculum planning</i></p> <p>Willingness to take managed risks on behalf of the employer, university, learners, and teaching staff as the co-produced programme requires these stakeholders to make a 'leap of faith' and focus on learning outcomes not inputs.</p> <p>Flexibility: Course validation requires a 'flexible shell' that can be populated through co-creation as the programme progresses.</p> <p>Appointment of an External Examiner: As an important dimension of course validation and quality.</p> <p><i>Curriculum design</i></p> <p>Co-creation process: Results in up-to-date course content and student engagement. Learners are able to bring current issues, challenges, and potential opportunities into the programme and explore them thoroughly.</p> <p>Flexibility: Programme has built in flexibility to accommodate new content to meet the contextual demands of each cohort.</p> <p><i>Delivery</i></p> <p>Regular periods of reflection</p>
Challenges	<p><i>Delivery</i></p> <p>Demanding role of tutors: Tutors assume the role of coach and mentor more fully than is often the case. In addition, the programme requires them to generate content in response to</p>

	reflective periods – e.g. by preparing material overnight, or by undertaking impromptu mini tutorials.
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	Employer support: Mainly time required for learning related activity in the workplace.
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6 ENGLAND: MASTERS IN PREVENTIVE CONSERVATION

Organisation: Northumbria University

Country: England

Field of Study: Arts

<p>Market Need</p>	<p>The programme developed in response to demand for further training and development from individuals already working within conservation care. The demand and need emerged for a highly flexible, vocational programme which allows individuals to participate without requiring them to give up paid work and/or relocate.</p> <p>When the initial development of the programme was taking place, there were no existing Master's programmes of this type within the UK. Traditionally, art collections had been cared for by individuals with an archaeology or art history degree.</p>
<p>Curriculum Planning</p>	<p>Governed by University guidelines.</p> <p>The University has a 'work-based learning framework' which sets out the principles and processes of work-based learning.</p> <p><i>Entry requirements</i></p> <p>First degree or comparable work experience in collections care.</p>
<p>Curriculum Design</p>	<p>Throughout the development of the programme the intention was to design a highly vocational course which would form the basis from which individuals could enter Collections Care or Preventive Conservation.</p> <p>The programme has a modular structure and is comprised of three fifteen week semesters. Semester two is purely work-based and includes a six-week workplace learning experience within a cultural heritage organisation, after the completion of which students are required to submit a Preventative Conservation Placement Report. Overall, the programme offers great flexibility</p>

	<p>in allowing the students to shape assignments to work in an area that is of particular interest to them.</p>
Delivery	<p><i>Highly interactive distance learning (online)</i></p> <p>Programme delivery is designed to be as flexible as possible in terms of how, when, and where students engage with the programme. Delivery is provided in two forms: full-time (one year), or part-time (two years) both via distance learning (online).</p> <p>The programme is delivered through lectures, seminars, and assignments. Methods are highly interactive, e.g. including the use of video demonstrations with voice-overs, or three-dimensional artefacts that students can rotate on screen.</p> <p>During their placements, students maintain a weekly electronic journal and contribute to weekly discussion boards in which students discuss a pre-determined aspect of Preventive Conservation.</p>
Student Assessment	<p>Assessment methods include assignments, portfolios, group tasks, the analysis and evaluation of case studies, examination, and presentations.</p> <p>Formative assessment takes place in tutorials, group discussions, and seminars. A tutorial report is the main mechanism through which formative assessment is recorded. Verbal and written feedback is provided to the student while work is being developed. All modules within the programme are summatively assessed at strategic points in the academic year.</p>
Course Evaluation	<p>Formative and summative.</p> <p>Student representatives are elected to represent the views of the student body. Programme feedback questionnaires and module feedback questionnaires are also used.</p>

	<p>Independent conservation groups and teaching and learning specialists are involved in the programme in the evaluation of course content, teaching and learning materials, and student support.</p>
<p>Critical Success Factors/Good Practice</p>	<p><i>Market need</i></p> <p>Demand-driven: The programme was developed (and driven) specifically in response to demand from professionals already working in the industry.</p> <p><i>Curriculum planning</i></p> <p>Support from the top: The culture of the University supports the delivery of the programme; support for this type of curriculum now comes from the top.</p> <p>Industry networks: Programme Leader's industry involvement and networks played a crucial role in responding to the identified market need.</p> <p>WBL framework: The curriculum planning framework utilises a university approved WBL framework which establishes a number of principles and processes and is focused on responding to professional practice.</p> <p><i>Curriculum design</i></p> <p>Highly flexible programme: Use of technology to deliver the programme via distance learning (online). The programme adapts appropriate work-based learning and online teaching, and learning approaches and pedagogies.</p> <p><i>Delivery</i></p> <p>Use of highly interactive and multi-dimensional approaches: Electronic Journals and weekly Discussion Boards which are managed via the electronic learning platform to encourage reflective practice and debate.</p> <p>Use of video demonstrations with voice-overs.</p>

Challenges	<i>Curriculum design</i> Initial resistance emerged from colleagues who had a traditional approach to university teaching and learning, and raised questions about the potential for the programme to work effectively online.
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7 GERMANY: BACHELORS IN 'PROZESSTECHNIK' (PROCESS SYSTEMS ENGINEERING)

Organisation: FH Aachen University of Applied Sciences

Country: Germany

Field of Study: Engineering

<p>Background Information</p>	<p>FH Aachen University of Applied Sciences had previously taken part in an EU project related to WBL: the DEWBLAM project (Developing European Work Based Learning Approaches and Methods) which ran between 2003 and 2007.</p> <p>The Rhein-Erft Academy is the vocational training institute of the chemical industry in this region.</p>
<p>Market Need</p>	<p>Deficit of chemical engineers in the region which became pronounced by 2005/06. To secure a stable supply of chemical engineers for the future, the companies turned to their own vocational training institution, the 'Rhein-Erft Academy'. The Academy, however, was unable to develop and deliver a Bachelor's course alone and thus asked the FH Aachen for support.</p>
<p>Curriculum Planning</p>	<p>The programme is developed through a collaborative process between FH Aachen and the Rhein-Erft Academy. FH Aachen, however, assumes the primary responsibility for curriculum planning.</p> <p><i>Legal framework</i></p> <p>FH Aachen must adhere to the respective core curriculum for universities of applied sciences in the state of North Rhine-Westphalia, while the Rhein-Erft Academy must follow the official training plan of North-Rhine Westphalia.</p> <p>The programme has been evaluated by an external accreditation agency, based on the rules of the Accreditation Council. The programme is up for re-accreditation next year.</p>

	<p><i>Individual learning agreements</i></p> <p>To adapt to the specific requirements of the work-based programme, individual learning agreements have been established alongside a definition of learning outcomes in order that achievements made in the work process can be recognised as academic performance.</p> <p><i>Admission requirements</i></p> <p>Candidates are selected by the Director of Study based on their previous performance. The admission process is highly selective, due to the heavy workload and large number of hours students must deal with. Tuition fees are usually paid by the employers.</p>
<p>Curriculum Design</p>	<p>Curriculum design is a cooperative process between FH Aachen and the Rhein-Erft Academy, and also takes into account the ideas and wishes of employers (which are represented by their human resource departments). Rhein-Erft Academy is responsible for initial studies and the core curriculum, while FH Aachen is responsible for advanced study subjects.</p> <p>The programme is structured into different (mandatory and optional) modules. The curriculum is designed to incorporate workplace processes as closely as possible i.e. students' projects or theses are based on the actual professional responsibilities of an individual student, and this enables the programme to incorporate daily work tasks as areas of study. The programme also includes provisions for the Accreditation of Prior Learning (APL).</p>
<p>Delivery</p>	<p><i>Tailored to students' needs</i></p> <p>The intention was to design a curriculum that allows students to manage their time efficiently while maintaining their (full-time) jobs. Courses and teaching take place in the evenings and on Saturdays, on individual attendance days, and during one or two block seminars. The overall duration of the course has been extended from six to eight semesters to better accommodate the life situation of the students.</p>

	Learning resources are provided by the FH Aachen or the Academy, while employers usually provide time in the workplace and the technical requirements like plants or laboratories.
Student Assessment	All examinations are carried out by FH Aachen.
Course Evaluation	Student feedback is collected for every class or seminar, for continuous quality control and improvement. The evaluation is carried out through questionnaires or interviews.
Critical Success Factors/Good Practice	<p><i>Market need</i></p> <p>Direct inclusion of work and employers at various stages: Including admissions, assessment, definition of learning outcomes, implementation, structure and design.</p> <p>Continuous contact with employers and good networking within the region.</p> <p><i>Curriculum design</i></p> <p>Integration of work activities into studies: e.g. with student projects or theses based on real-life work assignments.</p> <p>Continuous feedback loop between students, employers, and training providers.</p> <p><i>Delivery</i></p> <p>Individual tutoring provided to students in order to ensure the flexibility of the curriculum.</p> <p>Commitment to continuous improvement even if this requires changes in course material.</p>
Challenges	<p><i>Curriculum design</i></p> <p>Student workload: Keeping the workload manageable for students (who are also employed on a full-time basis) while complying with recognition standards.</p> <p><i>Delivery</i></p> <p>Maximum number of students: In order to maintain the current structure with highly individual tutoring and learning, and to ensure that the course remains technically feasible, the current maximum number of 20 students per course is the realistic maximum limit of participants.</p>

8 SPAIN: BACHELOR IN INDUSTRIAL ENGINEERING

Organisation: IHM (Instituto de Máquina Herramienta), in association with Universidad del País Vasco

Country: Spain

Field of Study: Engineering

Background Information	IMH, The Instituto de Máquina Herramienta, is a Foundation supported by companies and organisations in the Basque Country. IMH is one of the public Basque Government Professional Training centres and offers training in the field of engineering.
Market Need	In 1995, through interaction with different stakeholders such as employers and educational experts, IMH identified the need for training for engineers that is tailored to specific company needs. Since existing programmes could not provide what was required, IMH developed the Bachelor's degree in Industrial Engineering.
Curriculum Planning	Governed by Spanish Universities Regulations. The programme is based on the French 'Formation en Alternance' model, which is sometimes referred to as the French dual education. Through collaboration with the University of the Basque Country (EHU), the programme is verified in the Spanish University System, and inside the Bologna Process.
Curriculum Design	Co-created by the course team and companies. <i>Alternating periods of classroom work and practical training</i> The curriculum consists of two main 'blocks': the first block contains the conventional classroom modules in which students acquire the engineering skills, knowledge and competences required by law for practitioners. In the second block students undertake specialisation that takes place in a company in which the student will train for three and a half years. During this period the student is provided with a part-time working contract as a learner.

	<p>The final year of the programme includes a 12-week work placement in a company outside Spain and the so-called Individual Training Project (PFI), in which students individually self-assess their progress.</p> <p><i>Individual (tripartite) learning contracts</i></p> <p>The teaching of the theoretical modules is a legal requirement and consequently cannot be altered. The second block (the work placement and the specific work specialisation and area of each student), however, is negotiated individually through a learning contract which is signed by the student, the company, and IMH. This second block accounts for 28 per cent of ECTS awarded in this course.</p> <p><i>Allocation of students to companies</i></p> <p>At the beginning of the course, the individual responsible for external relations for the programme contacts companies in the region to enquire about their training and staff needs. This procedure is used to allocate new students (approx. 40 per year). Most students are drawn from vocational education, but some are workers in the contacted companies that require additional training.</p>
<p>Delivery</p>	<p><i>Programme format</i></p> <p>The first semester is delivered entirely at IMH. In the second semester, there are alternating periods of classroom work and practical training within the company. Typically, three days of work within the company are followed by two days of classroom work. Once per month students spend three days at IMH and two days within their company – to facilitate the accomplishment of theoretical modules.</p> <p>Classroom delivery is carried out by IHM faculty staff (60 per cent) and external experts (40 per cent). Methods used include oral sessions, classroom activities, practical exercises and simulations, case studies, laboratory and computer exercises, industrial workshops, and applied projects.</p>

	<p>During their placement students are required to develop real projects. While in the workplace each student is assigned a company tutor who monitors the student throughout the placement and organises formal monthly meetings. Company tutors receive special training.</p>
<p>Student Assessment</p>	<p>Continuous assessment of classroom performance and assessment of students' projects. Final projects are assessed by a panel including external experts.</p> <p>Progress in the work placement is monitored on a monthly basis by the student and the company tutor and is documented within the student's notebook. The work placement abroad is assessed through the student's written report. This report is in English and includes an oral presentation. Furthermore, the evaluation of the company tutor abroad is used to assess performance of the student.</p>
<p>Critical Success Factors/Good Practice</p>	<p>Good labour market insertion: Before the crisis, almost 80 per cent of students received a job within the company in which they trained after graduation. Currently this percentage has now fallen to 60 per cent, but nevertheless three months after graduation more than 90 per cent of graduates are in employment.</p> <p><i>Curriculum design</i></p> <p>Individual learning contracts, signed by learner, employer, and IMH, define the competences to be acquired by the end of the programme for each learner.</p> <p><i>Delivery</i></p> <p>Alternating periods of classroom work and practical training: Three days spent within the company followed by two days of classroom work.</p> <p>Regular communication: Between IMH and company tutors based on a systematic procedure. Role of tutors is key to programme monitoring and coordination.</p>

Challenges*Curriculum planning*

Creation of a 'dual' study programme while meeting the requirements set by law. Spanish regulations do not facilitate special contracts for learners in companies.

9 CZECH REPUBLIC: POSTGRADUATE DIPLOMA/MASTERS IN MODERN RAILWAY VEHICLES

Organisation: Czech Technical University Prague

Country: Czech Republic

Field of Study: Engineering

Background Information	CTU Prague, one of the most significant Czech research universities, does not currently consider the development of WBL a strategic priority. Nevertheless, several WBL courses or initiatives have been developed and realised at the university. The motivation behind these programmes was a desire to strengthen cooperation with employers in the development of curricula.
Market Need	The programme was designed to ensure that the study of railway vehicles continued on a sustainable basis at CTU Prague and that quality education in this field was provided in the long term for young engineers. The key purpose of the programme is to raise students' interest in Rail Vehicles studies and to improve graduates' prospects in the labour market.
Curriculum Planning	Governed by University guidelines and agreement between University and the company.
Curriculum Design	Co-created by the CTU, Siemens, and Škoda Transportation. Framework agreements on cooperation cover five technical subjects and one optional subject.
Delivery	Work-based learning is integrated through the involvement of companies in the following ways: field trips to manufacturing plants, diploma theses, consultations, specialised lectures and project teaching, preparation and supervision of semester projects and theses, excursions, and provision of study achievement scholarships.

Student Assessment	Evaluation of student performance is based on the exchange of knowledge between programme leaders, tutors, and students.
Critical Success Factors/ Good Practice	<i>Curriculum planning</i> Employers' readiness to cooperate and invest time in curriculum design and implementation.

10 FINLAND: BACHELOR IN BUSINESS ECONOMICS

Organisation: Vaasa University of Applied Sciences (VAMK)

Country: Finland

Field of Study: Business

<p>Background Information</p>	<p>At Finnish Universities of Applied Sciences, learning is legally required to consist of both theory and practical experience. At Vaasa UAS this is achieved through the so-called Company Clinic. The Vaasa region is one of the strongest export-industry regions in Finland with 24 per cent of the population employed in industry.</p> <p>Company Clinic assignments allow students to apply theory to real company problems. In receiving extra assistance in dealing with a particular problem, the employers, and the SMEs in particular, also benefit from this initiative. Many of these assignments are paid.</p>
<p>Market Need</p>	<p>Vaasa UAS wishes to connect its activities to regional industries and work more closely with employers. The Company Clinic helps students to gain practical experience. At the same time, it strengthens Vaasa UAS's ties with industry and provides one solution to the development needs of SMEs in the Ostrobothnia area of Finland.</p>
<p>Curriculum Planning</p>	<p>Development of the curriculum began in 2006; it became operational in 2010. It is based on a continuous dialogue between Vaasa UAS and employers. Each module should include a connection to practical experience. As it was not feasible to achieve this through work placements, the concept of a Company Clinic was developed.</p>
<p>Curriculum Design</p>	<p>The curriculum is structured in modules and follows a competence-based approach.</p> <p>The programme includes the following forms of WBL: Company Clinic tasks integrated in several key courses, mandatory 3-month work placement, and thesis work. Thesis work is typically (in 75 per cent of cases) carried out for a particular company, and on company premises.</p>

<p>Delivery</p>	<p>Teachers are free to determine the share of Company Clinic activities in their courses, and they may comprise up to 50 per cent of the credits in a course. Students, teacher(s), and company tutors work together to adapt the goals and methods of each specific case.</p> <p>The majority of Company Clinic assignment work is undertaken at Vaasa UAS, although some work is also carried out on company premises.</p>
<p>Student Assessment</p>	<p>Each Company Clinic assignment concludes with a written report, including a final evaluation from the company. Throughout the assignment there is continuous feedback in both directions between students and teaching/training staff.</p> <p>Student assessment includes self-evaluation and peer review at the end of each course. Feedback from company tutors is received through a joint feedback discussion with students and the teacher.</p>
<p>Course Evaluation</p>	<p>Course feedback collected from students.</p> <p>Vaasa UAS has an annual planning and evaluation process for its curricula.</p>
<p>Critical Success Factors/ Good Practice</p>	<p><i>Market need</i></p> <p>Involvement of SMEs: While it is relatively easy to involve the largest employers in shaping the contents of the curriculum, it is very difficult to achieve SME participation in this process. Through Company Clinic assignments these smaller enterprises can be involved at a course level.</p> <p><i>Delivery</i></p> <p>Company Clinic coordinator: There is a full-time coordinator for Company Clinic activities who is responsible for maintaining contact with the companies, evaluating and confirming the tasks to be conducted by the students, and signing the agreement with the company.</p>

Challenges

Delivery

Obtaining suitable assignments at suitable times throughout the year has been easy in some fields (such as tourism) but more problematic in others (such as business).

Teachers' unwillingness to dedicate time to Company Clinic assignments due to a reluctance to give up part of their traditional classroom teaching.

11 AUSTRIA: DIPLOMA PROGRAMME IN PRODUCTION TECHNOLOGY AND ORGANISATION (4-YEAR PROGRAMME)

Organisation: FH JOANNEUM University of Applied Sciences, Graz

Country: Austria

Field of Study: Engineering

<p>Background Information</p>	<p>In 2011, the structure of the programme was completely changed into a three plus 2 year (Bachelor and Master) programme. Under the new programme, the first study year will entirely be spent at university.</p>
<p>Market Need</p>	<p>The manufacturing industry is still strong in the province of Styria. It consists primarily of medium-sized family companies, a large number of SMEs, and some larger companies that are involved mainly in steel processing, automotive, electronics, wood, pulp and paper. Companies rely heavily on exports.</p> <p>Traditional higher education (HE) institutions provide sufficient specialist training in electrical, mechanical, and process engineering. However, many companies require 'academic site managers' - individuals with HE skills that also fulfil the traditional requirement of having 'grown' through vocational education within the company (e.g. through an apprenticeship).</p>
<p>Curriculum Planning</p>	<p>Well-established process at Austrian universities of applied sciences:</p> <ul style="list-style-type: none"> - Curriculum development team including academic and industry experts - External analysis of labour market demand (for graduates from the programme) and prospective students' interest in the programme - Accreditation of the programme by the national accreditation body

	<p>The model of the 'Baden-Württemberg Cooperative State University' in Germany was chosen as an example of a work-integrating model of HE, and representatives of this university were included as consultants in the planning process.</p> <p>The programme was developed between 1999 and 2001 and became operational in 2002.</p>
Curriculum Design	<p>The content of the programme was oriented towards the needs of the above mentioned site manager. It was developed by altering a regular programme in mechanical engineering through reducing the basic science content and introducing a strong focus on organisational issues such as Logistics and Quality Management.</p> <p>The curriculum was designed by a group consisting of two experts from the university and two teachers from an engineering college. The latter were involved in the process because there was a desire to enable graduates from engineering colleges to have their prior learning recognised when starting the programme.</p>
Delivery	<p>Cooperative (dual) education with alternating periods of academic education and work periods within a single company. Each academic semester lasts for three months and is followed by a period of practical training of between six weeks and six months.</p> <p>For the duration of the programme, students have a four-year part-time work contract with a company. During their course, students spend a total of 24 months working full time within the company, and the remaining periods studying within university.</p>
Critical Success Factors/ Good Practice	<p><i>Market need</i></p> <p>Communication with companies needs to be continuous and sensitive and must focus on the creation of added value for regional industry.</p> <p>Attractiveness: Cooperative education as a possible solution to a dropping interest in engineering among young people and high cost of engineering laboratories.</p> <p><i>Curriculum planning</i></p>

	<p>Flexibility: Conditions at the university have to allow for a high level of freedom for strategic development of the programme in order to meet expectations of all stakeholders.</p> <p><i>Delivery</i></p> <p>Importance of a strong student body as a partner for improvement on all levels.</p> <p>Part-time teacher contracts are favoured in order to better maintain connections to the industry.</p> <p>Precise time planning is required: Exact dates for each rotation (from academic study to practical work and vice versa) must be established at the beginning of the programme as companies need to know exactly when students will arrive and leave.</p>
<p>Challenges</p>	<p><i>Curriculum design</i></p> <p>High level of flexibility in delivery of the curriculum puts pressure on curriculum design: assuring overall quality in learning contents is an obstacle.</p> <p><i>Delivery</i></p> <p>Due to their double burden (they study while being employed full time), students have only limited time which raises organisational problems.</p>

12 CZECH REPUBLIC: ENTERPRISE MANAGEMENT IN PRACTICE (I.E. A COURSE WITHIN THE MASTER'S PROGRAMME IN MECHANICAL ENGINEERING)

Organisation: Czech Technical University in Prague

Country: Czech Republic

Field of Study: Engineering/Business

Market Need	The market requires engineering graduates with well-developed managerial skills. The course was initiated by the University to bring business experience into the Master's programme and improve the quality of the overall programme.
Course Design	Co-created by the course instructor and leading managers from Škoda Auto and Inekon Systems Company. The course is mandatory for students in the Mechanical Engineering programme. The course allows students to: <ul style="list-style-type: none"> - Listen to business executives' accounts of their experience - Conduct discussions with these executives - See that the methods and tools they learn in theory are used in practice within companies
Delivery	Delivery is provided through 13 workshops with leading managers. Workshops last for five hours each and include lectures from external experts, discussions of practical cases, the development and presentation of student projects, and the evaluation of the these projects.
Student Assessment	Managers participate in and evaluate the students' project presentations.
Course Evaluation	Students evaluate each workshop through a questionnaire. Additionally, they evaluate the entire course via a computer system. Overall course evaluation is performed by university staff and in consultation with external experts.

	The results are used to continuously improve the course.
Critical Success Factors/ Good Practice	<ul style="list-style-type: none">- Good relations with employers and mutual respect between parties- Leading managers' willingness to devote time to the course (typically without financial reward)

13 AUSTRIA: BACHELOR IN MECHATRONICS AND MANAGEMENT

Organisation: University of Applied Sciences (UAS) Upper Austria

Country: Austria

Field of Study: Engineering/Business

<p>Market Need</p>	<p>Specific need for the up-skilling of graduates of engineering colleges. This group already possesses advanced engineering skills, but many employers also require employees to have sound business skills.</p> <p>Study programme was designed and further developed in communication with the regional labour market (enterprises). The high level of acceptance of the study programme by students (and their employers) is evidence of the overall need for such a programme in the market.</p>
<p>Curriculum Planning</p>	<p>Well established communication structures, balancing different target groups for composition of development teams. Different analyses are taken into account.</p>
<p>Curriculum Design</p>	<p>Part-time Bachelor programme.</p> <p>Support through UAS expert group and information management (templates and documents related to curriculum design), high level of flexibility within the study programme is seen as one of the major success factors.</p>
<p>Delivery</p>	<p>High level of flexibility provided (overarching subject projects, individual focus on real life problem solving is seen as crucial), high regard for students and their expert status (accreditation of prior learning, composition of student groups based on the students' abilities to contribute to real life problems, etc.). The major challenge for students is that they study while remaining employed on a full-time basis.</p>
<p>Course Evaluation</p>	<p>Well established feedback structures, respect for feedback from every individual student, study programme management operates an open door policy towards students. Established communication</p>

	<p>structures with the labour market.</p> <p>Highly rated in study programme rankings.</p>
<p>Critical Success Factors/ Good Practice</p>	<p><i>Curriculum planning</i></p> <p>Fruitful communication processes between the UAS and the supporting companies to develop a curriculum and an organisation of the study programme that meets the demands of students and the labour market.</p> <p><i>Delivery</i></p> <p>Additional learning support for the (re-)integration of students (who are full-time workers) into learning activities within the university environment.</p> <p>High level of flexibility within the curriculum through subject overarching projects, following a defined project definition and delivery structure.</p>
<p>Challenges</p>	<p><i>Curriculum design</i></p> <p>High degree of flexibility in delivery of the curriculum puts pressure on curriculum design: assuring overall quality in learning content is an obstacle.</p> <p><i>Delivery</i></p> <p>Due to their double burden (they study while being employed full time), students have only limited time which raises organisational problems.</p>

14 ENGLAND: BACHELOR IN BUSINESS LEADERSHIP AND CORPORATE MANAGEMENT

Organisation: Northumbria University

Country: England

Field of study: Business

Background Information	<p>This programme is aimed at high calibre students and has a demanding and high entry level standard.</p> <p>Nissan is one of the programme's key 'Learning Partnership' employers.</p>
Market Need	<p>Need for responsive undergraduate programme to enable employer organisations to recruit talent early and accelerate the progression of them within the company.</p>
Curriculum Planning	<p>Governed by the University's Work Based Learning Framework.</p>
Curriculum Design	<p>Designed around a work-focused and work-based curriculum to replace or supplement existing graduate recruitment schemes employer organisations may have.</p> <p>This type of approach is intended to blend the academic development of students with their job role with an employer.</p>
Delivery	<p>3-year work-based degree programme – year 1 is university-based and years 2 & 3 are spent with an employer organisation (in a full-time paid position).</p> <p>Employers are recruited to be a 'partner organisation'; they agree to take students on a two-year work-based 'Learning Partnership', recruiting them to a suitable position which provides a 'graduate level' role. They are required to allow students to attend the University for two study blocks each year (each of two weeks duration).</p>
Course Evaluation	<p>Formative and summative. Subject to the University QA process</p> <p>Regular feedback from students module by module and on the programme as a whole. Continuous feedback from employers.</p>

<p>Critical Success Factors/ Good Practice</p>	<p><i>Market need</i></p> <p>Recruitment of best talent: programme design facilitates employers being able to recruit early the best student talent prior to graduation.</p> <p><i>Curriculum planning</i></p> <p>WBL Framework in place which sets out the principles and processes of WBL.</p> <p>Support from the top: the culture of the University supports the delivery of the programme.</p> <p><i>Curriculum delivery</i></p> <p>Academic Performance Coaches: University staff with strong practitioner/business backgrounds who will provide ongoing support to the students.</p> <p>Experienced University staff: have a vast amount of experience in the workplace having had a career in business before coming to University and becoming academics.</p> <p>Well-established support structures in the workplace: students are supported by a mentor and their 'senior'.</p>
<p>Challenges</p>	<p><i>Delivery</i></p> <p>Potential conflict: students are torn between satisfying the needs of the employer and their degree/course.</p>

15 FINLAND: BACHELOR IN SOCIAL WORK WITH CHILDREN, YOUTH AND FAMILIES ('LASTEN, NUORTEN JA PERHEIDEN ASIAKASTYÖ')

Organisation: Seinäjoki University of Applied Sciences (SemMK)

Country: Finland

Field of study: Social Work

Background Information	The programme started in 2009; this summer (2013), the first students will graduate with a BSc.
Market Need	The programme has been developed for young people who have started working in the field of social work and who only have a vocational degree (i.e. no higher education degree).
Curriculum Planning	At Finnish Universities of Applied Sciences, learning is legally required to consist of both theory and practical experience.
Curriculum Design	Contrary to most other programmes, the curriculum is designed in a way that students will study social work topics (mostly through workplace learning) at the beginning of the programme, while the more general subjects (such as languages) will be covered in the later stages of the programme ('from practice to theory').
Delivery	<p>Blended learning, problem-based learning, distance studies; during the later years of the programme, more traditional course work. In the workplace, students are supported by workplace mentors.</p> <p>The first 60 credits are spread over two academic years, mostly based on distance study (using Moodle). During this time, there are only 72 days of classroom teaching and two study trips (to Sweden and Denmark).</p> <p>As much of the learning as possible takes place during the students' working hours in their jobs, involving not only their colleagues from work but also the children being nursed and their families.</p>

Student Assessment	Takes place at the end of each course, including self-evaluation and peer review.
Course Evaluation	Student feedback has been collected through open discussion sessions with the students and an online survey.
Critical Success Factors/ Good practice	<p><i>Curriculum design</i></p> <p>Course structure: Mostly workplace learning and distance study in the first part of the programme. This should introduce students to academic studies and encourage them to fully concentrate on their studies in the later stages of the programme.</p> <p><i>Delivery</i></p> <p>Students' workplaces form an integral part of the learning environment.</p> <p>Reflective learning: Students are encouraged to analyse academic theories from the perspective of their workplace.</p> <p>Benefit to the employer: Students involve their colleagues into the learning process.</p>
Challenges	<p><i>Delivery</i></p> <p>Students' background and motivation: Students have heterogeneous educational backgrounds and different levels of motivation (about half of them have not managed to achieve the required 60 credits within the first two years).</p>