



Analysis of Good Practices Developing the Quality of Work-Based Learning and Preparations for Transfer

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A preliminary WBL – TOI draft manual: Description of common features of good practices in work-based learning

A.) Introduction

In the following, an analysis of good practices of work-based learning (WBL) based on the discussions at the transnational meetings in Vienna and Rome, literature research and the delivered case studies will be presented.

Hence, the subsequent chapter B will outline concepts related to learning and work-based learning to facilitate a common understanding of work-based learning. Eventually a definition of work-based learning is forwarded.

Chapter C will deepen the conceptual discussion and aims to clarify upon the meaning of developing work-based learning by transferring existing good practices into the common quality assurance framework. Moreover, chapter C offers an analysis of the nine case studies delivered by the partners. The first sub-chapter applies the definition of work-based learning elaborated in the first chapter to the case studies. The second sub-chapter aims to derive criteria of good practices of work-based learning. It will be highlighted that criteria such as the mix of stakeholders, the degree of integration of stakeholders, standardisation, adaptation, effectiveness, sustainability, innovativeness and measurability are seen to be useful for identifying good practices in terms of planning of work-based learning. Also, the good examples of planning of work-based learning should fulfill high quality by making use of some sort of quality assurance. Afterwards, the different planes of analysis inherent in the delivered case studies are dealt with: Planning, innovative stakeholder practices and quality assurance are concentrated on within all cases studies, even though the focus on these elements varies from case to case. Good practice is mainly related to planning of innovative stakeholder examples of work-based learning and assuring their quality. Effectiveness, measurability, adaptation and sustainability are not at the heart of the cases. Sub-chapter four will suggest a grid for analysing the case studies taking into account the process elements of planning good practices and their context. Such a grid is helpful to reflect on the transfer of the practices and assure their quality. The grid can be seen as a sort of ‘mind-map’ keeping in mind when transferring elements of a good practice. Before drawing a conclusion, sub-chapter five will discuss the transfer process of work based learning. The eventual outcomes of the WBL-TOI draft Manual (which will be produced in the project further on) are pointed to and key questions for operative partners to be answered within the manual are highlighted.

The appendix will delineate the value of the grid by applying it to the case studies provided. Furthermore, answers by the partners about the key elements of their examples and the delivered case studies are included for illustration purposes.

B.) Towards a common understanding of work-based learning

‘Traditionally and still in today’s common sense, learning is strongly associated with “schooling” or any form of organised education. The type of schooling is often taken as a good enough proxy for a type of learning. Other sites of learning – the workplace, the family, civil and political organisations, the churches – are at risk to become neglected. It is useful to carefully draw a line between classifications of learning and classification of organised education.’¹

‘Things become even more complex, when the types of learning and education and the types of *knowledge* (e.g. theoretical and explicit versus practical, tacit and implicit knowledge, formal knowledge versus personal and context-sensitive, situated knowledge) or types of *competences* are merged. Here, seminal writings (e.g. Polany, Batson, Argyris and Schoen, Dreyfus & Dreyfus, Lave and Wenger, Nonaka and Takeu) of the past four decades have changed our ideas of how to understand the relation of the content of learning and the ways how we learn.’²

1.) Concepts of learning

Starting with established classifications of learning, used e.g. in the manual for the Adult Education Survey³, we find distinguished formal, informal and accidental learning. The three forms could be classified on two dimensions, namely, the dichotomies between organised and non-organised and between intentional and non-intentional learning. Formal learning is any form of learning within an organised context with a specified programme of learning. The often found additional distinction between formal and non-formal learning is actually a way of mixing up classifications of learning and classifications of forms of education. Nevertheless, it is a convention to distinguish between learning that takes place within the system of schools, leading to qualifications recognised within the educational ladder and other learning in other organised courses without these specific criteria (‘formal’ and ‘non-formal’). Both, formal and informal learning is intentional, which means, the individual who is learning intends to learn. Learning is in the focus of a described activity. When learning occurs alongside other activities, but is not in the focus of activity, it is labelled as ‘accidental’ learning (see figure 1).

Table 1: Conventional approach for classifying learning

	Intentional	Non-intentional
Organised in the form of courses	formal (Classifying Education : formal versus non-formal)	
Not organised in the form of courses (but in different ways)	informal	accidental

Source: Hefler 2009

¹ Hefler (2009): The qualifications supporting company – the significance of formal adult education in small and medium organisations. Draft version of the synthesis report for subproject 4 within the LLL2010 research project. Status: 17th of July 2009. Krems: Danube University Krems. Note: 3s consultancy was involved in the acquisition of firms, drafting of case studies and the evaluation of data for this paper.

² Hefler (2009): The qualifications supporting company – the significance of formal adult education in small and medium organisations. Draft version of the synthesis report for subproject 4 within the LLL2010 research project. Status: 17th of July 2009. Krems: Danube University Krems. Note: 3s consultancy was involved in the acquisition of firms, drafting of case studies and the evaluation of data for this paper.

³ Continuous Vocational Training Survey, carried out by Eurostat

’The traditional distinction of forms of learning is quite unsatisfactory in that way, that it implicitly proposes a hierarchy of importance of learning activities. It suggests that formal learning activities (including formal and non-formal education) contributes most to intended outcomes as skills or qualifications, while informal learning is less important and accidental learning is only of peripheral importance at all. However, accidental and informal learning are both of equal importance with formal learning. Participation in communities and processes forms a backbone of learning in any context, even in formal education, where the ’books read’ and the ’lectures given’ are responsible only for a small fraction of what we actually learn.’⁴

2.) Concepts of education

Continuing with classifications of education meant as organised ways of teaching, traditionally formal, non-formal and informal education are distinguished. Figure 2 provides an ’overview, showing two axis for organising the concepts. One clear dimension is the differentiation between forms of education with *standardised curricula* with comparable teaching input and comparable learning outcomes and forms of education, where input and outcomes are not standardised. Standardisation of education is important, as employers could rely only on the signalling value of certificates, when they could know what graduates could be expected to do.’⁵ A second dimension is the division between class-room based (or educational institution based) education and workplace based (or company based) education. Normally, the terms formal and non-formal education are used in particular for distinguishing two types of class-room based education. Any other organised learning activity is labelled than as ’informal’, in particular, learning organised in the work place.

Table 2: Conventional approach for classifying educational activities

	’Class room based’	’Workplace based’
’Formal’ and Standardized curricula (similar teaching input and expected learning outcomes)	formal	(’formal’) apprenticeship training, work-based programmes leading to formal qualifications
Non standardized curricula	non-formal	employer specific planned ’On the job training’

Source: Hefler 2009

’In many countries, work-based education is mainly “non-standardised” and organised on a company base only (in particular in major companies), oriented on the needs of the internal labour markets. The education of different companies follow different routes, outcomes are not comparable and hardly accessible for “outsiders” on the labour market. In other countries, standardised ways of vocational training, taking place in the workplace has been established,

⁴ Hefler (2009): The qualifications supporting company – the significance of formal adult education in small and medium organisations. Draft version of the synthesis report for subproject 4 within the LLL2010 research project. Status: 17th of July 2009. Krems: Danube University Krems. Note: 3s consultancy was involved in the acquisition of firms, drafting of case studies and the evaluation of data for this paper.

⁵ Allmendinger (1989): ”Educational systems and labour market outcomes”, in: European Sociological Review, 5: 231-250

notably in Germany and its Dual System.⁶ Other countries have implemented comparable schemes, leading to a work-based, but highly standardised and “formal” education. At least for these forms of work-based education, actually embedded within the educational system of a country, the term “informal” is quite misleading. Here, the difference between standardised and non-standardised forms of workplace learning refers also to differences in the ways labour markets are predominately organized (“vocational space” versus “organisational space”).^{7, 8}

3.) The meaning of work-based learning

In the research literature as well as among practitioners, it is highlighted that the traditional ways of classifying education has become somewhat obsolete and could become an obstacle for a more appropriate understanding. On the one hand, class room based education has co-opted many forms of didactical approaches originally developed in (informal) workplace learning. *‘School-based learning has adopted many practices that originally emerged from authentic work contexts. These include the notion of situated learning, problem- and project-based learning, and apprenticeship training (as well as methods such as modelling, coaching, scaffolding, fading, and mentoring)’*⁹ Work-based elements constitute therefore a core element in the curricula of the majority of educational programmes, notably vocational ones. ‘On the other hand, it is clear that any successful learning within educational programmes includes a broad variety of forms of learning: any ‘formal’ education is based on informal and accidental learning as well. For learning explicit knowledge, learners require approaches for ‘internalise’ this knowledge, transforming it in a personal, tacit way.’¹⁰

Work-based learning, as understood within this project, recognizes in the same fashion that the simple dichotomy between formal and informal learning, intentional and non-intentional learning, formal education and non-formal education or class room based education and workplace-based education does not hold anymore. More explicitly, the case studies of the partners will illustrate that it is not viable to prefer formal learning to informal and accidental learning as well as to prefer formal and non-formal class-room based education to informal workplace education. It should be emphasised that the workplace offers as many learning opportunities as the classroom.

‘Work-based learning expressly merges theory with practice, knowledge with experience. It recognises that the workplace offers as many opportunity for learning as the classroom. Work-based learning allows us to learn from lessons learned in the practice by expressly examining the exchange of knowledge and experiences. Such learning, however, needs to be centered around reflection on work practices. Reflection with others offers the key to competing successfully in the twenty-first century marketplace.’¹¹

⁶ Thelen 2004, in: Hefler (2009): The qualifications supporting company – the significance of formal adult education in small and medium organisations. Draft version of the synthesis report for subproject 4 within the LLL2010 research project. Status: 17th of July 2009. Krems: Danube University Krems.

⁷ Mardsen 1999, in: Hefler (2009): The qualifications supporting company – the significance of formal adult education in small and medium organisations. Draft version of the synthesis report for subproject 4 within the LLL2010 research project. Status: 17th of July 2009. Krems: Danube University Krems.

⁸ Hefler (2009): The qualifications supporting company – the significance of formal adult education in small and medium organisations. Draft version of the synthesis report for subproject 4 within the LLL2010 research project. Status: 17th of July 2009. Krems: Danube University Krems.

⁹ Eteläpelto 2008, in: Hefler (2009): The qualifications supporting company – the significance of formal adult education in small and medium organisations. Draft version of the synthesis report for subproject 4 within the LLL2010 research project. Status: 17th of July 2009. Krems: Danube University Krems.

¹⁰ Hefler (2009): The qualifications supporting company – the significance of formal adult education in small and medium organisations. Draft version of the synthesis report for subproject 4 within the LLL2010 research project. Status: 17th of July 2009. Krems: Danube University Krems. Note: 3s consultancy was involved in the acquisition of firms, drafting of case studies and the evaluation of data for this paper.

¹¹ Seufert (2000): Work-based learning and Knowledge Management: An integrated Concept of Organizational Learning. is2.lse.ac.uk/asp/aspecis/20000126.pdf (7.7.2009).

A more holistic understanding of work-based learning highlights not only the mutual benefits of learning at school and working at a company, but also different types of knowledge such as explicit and tacit knowledge or theoretical and practical knowledge.¹²

‘Traditionally, these two “main components” of knowledge have been studied separately. So while educational studies have focused on the individuals’ acquisition of formal knowledge, the development of practical knowledge has been the centre of attention in working-life contexts. Increasingly however, attention has begun to be paid to the integration of the components of expert knowledge in learning and in the development of workers. This increase in attention is congruent with the view that knowing and doing are inseparable – that is, the knowledge dichotomy is a false.’ (Filstad/McManus 2009)

The core of work-based learning is its focus on the workplace. Seagraves defines work-based learning as ‘learning that takes place at, from or for work¹³.’ Similarly Lynne and Caley identify work-based learning as ‘learning for work, at work and learning through work¹⁴.’ In this sense, it is more than just a reform of education towards the companies’ needs or the practitioner being more reflected in terms of transfer of skills and competences.

However, work-based learning demands for a certain degree of standardisation or institutionalisation to foster comparison between programs, quality or allow for signaling to companies. While flexible curricula can be very valuable, they still do have to fulfil certain quality standards. Consequently, non-formal education at the classroom or non-standardised education curricula at single companies is not a focus in our project.

A broader perspective on work-based learning taking into account the issues raised so far and better suited to partner discussions might be the following: First, work-based learning involves tripartite relationships between the employer organisation, the educational institution and the student. Second, the employer and the educational institution both contribute to the student’s learning process. Third, work activities and professional roles are the starting point of work-based learning and therefore structured learning is relevant to the activities of the workplace. And fourth, work-based learning provides a structure to support student autonomy: the student is responsible for identifying learning needs, and for planning how they will be met. Academic and workplace tutors facilitate learning.¹⁵

The crucial role of a functioning structure of guidance should not be neglected, since the transfer of school based knowledge to workplaces is not a simple process and without conflicts. Workplace learning is most successful when ideal learning conditions exist. This includes guided learning (for example mentoring or coaching) which ‘helps to develop the kinds of knowledge required for work performance¹⁶.’ Eraut and Hirsh (2007) in the same fashion advocate connecting novice workers with those who are more skilled through use of mentoring and note the importance of receiving feedback at work, as well as ‘forming relationships of mutual trust’.¹⁷

¹² Filstad/McManus (2009): Knowledge as a question of knowing at work: implications for learning to become professional. Norwegian School of Management, University of New South Wales, mimeo.

¹³ Seagraves 1996. In: Hardacre/Schneider (2007): Work-based learning interim project report. Overview of literature. www.heacademy.ac.uk/assets/York/documents/employer_engagement/work_based_learning_literature_review_30_October_07.pdf (27.1.2009)

¹⁴ Hardacre/Schneider (2007): Work-based learning interim project report. Overview of literature. www.heacademy.ac.uk/assets/York/documents/employer_engagement/work_based_learning_literature_review_30_October_07.pdf (27.1.2009)

¹⁵ Dewar 2003: In: *ibid*.

¹⁶ Billett 2001. In: Lundsteen (2009): ‘Consequential transition’ in internships. University of Oxford, mimeo.

¹⁷ Lundsteen (2009): ‘Consequential transition’ in internships. University of Oxford, mimeo.

In order to draw a final conclusion and arrive at a sort of open definition of the meaning of work-based learning, the following criteria might be considered summarising major points of this outline.

- Work-based learning should involve a sort of network or partnership between enterprises, educational/training institutions, learners and possibly public or semi-public actors.
- Work-based learning is not restricted to the workplace only, even though a strong focus on work activities, professional roles or the workplace in general is at the centre. The mutual benefits of theoretical learning at the classroom and practical learning at companies are emphasised.
- A structured knowledge transfer takes place: Non-standardised curricula at the classroom (non-formal education) or the workplace (employer specific education only) are not focused on.
- The linkages between formal, informal learning and accidental learning are central.
- Theoretical, formal, explicit knowledge and practical, context-specific, tacit/implicit knowledge are important.
- A structure to support student autonomy at school and the workplace is crucial. Likewise, institutional learning processes demand for some sort of guidance by an agent.

C.) **Development of work-based learning by transferring existing good practices in the Common Quality Assurance Framework (CQAF)**

1.) **Examples of work-based learning**

The development of the analysis of work-based learning is based on a first selection of nine case studies delivered by the partners. All the cases do focus on mutually benefiting stakeholder relationships, on work activities, formal education and student guidance. What is more, nearly all examples (apart from case 3 and possibly case 2) focus on initial vocational education if defined as a continuous ‘ladder’ beginning at the age of fourteen and continuing up to tertiary level¹⁸. In the following, a short description of the cases based on the definition from the last chapter is given:

Case 1 Mastertrad Skillab: The case illustrates a Master program with employment status at tertiary level in the field of project techniques and methods and production systems. The example is labour market oriented since it aims to meet company needs. The job profile of a specialist combining technical and business knowledge is at the centre of the course. Companies have been integrated in the set up of the curriculum and training takes place at school and the companies. Hence, the project aims to benefit from the core competences of different stakeholders. Student guidance (e.g. availability of a company tutor) is as well an element of the formal education program. Explicit and implicit knowledge should be acquired. Activities realised in the companies are synthesised within brief reports and are subject to presentations.

Case 2 Tutortrad Skillab: The case describes a flexible system of didactic courses related to transversal training of professional apprenticeships. The project is designed especially for small and medium sized enterprises having difficulties of providing the respective skills. Thematic areas such as organisation and economics, work relationships, safety and relational competences are focused on. The stakeholders involved are the Milan Polytechnic, Skillab, students and companies including tutors. The Ministry of Labour and Social Security contributes financial allocations. Student guidance by tutors is also an important element of the example. The project combines standardisation in terms of learning outcomes and flexibility by offering learning contents adapted to the workplace.

Case 3 Fiatest Non-Formal: The case refers to the Romanian ‘nonformal/informal CVT subsystem’ where competence assessment centres evaluate knowledge, skills and attitudes of workers having already some occupational experience. If it is preferred, a tutor appointed by the company in consultation with the assessment centre is selected to prepare for the examination. A student can as well participate within a formal training program. The stakeholders involved are the competence assessment centre, the candidate, certified competence assessors and the employer of the candidate. In case of non-validation, the process continues until the necessary skills’ level is reached. Hence, student guidance is a vital element of this example.

Case 4 Fiatest Formal: The case refers to the formal CVT system in Romania where students are enabled to accumulate knowledge and skills in a training environment with trainers and a structured curriculum (authorised training program). The formal CVT offers, however, two options: Qualification training programmes (360 to 1080 hours depending on the level) including theoretical (1/3) and practical (2/3) contents or improvement/specialising trainings including a work-based learning component encompassing two-thirds of the training (40 hours to 1 month). The interplay between different stakeholders such as students, companies, trainers, tutors and CVT providers

18 CEDEFOP (2008): Initial vocational education and training (IVET) in Europe.
http://www.cedefop.europa.eu/etv/Upload/Information_resources/NationalVet/Comparative/IVET_Review_08.pdf
(10.7.2009).

becomes again visible. Also, student guidance takes place to support the formal education process. The value of explicit and tacit knowledge within companies is emphasised by this case study.

Case 5 Pirkanmaa Vocational Institute systematic work-based learning process: The case deals with compulsory structured upper secondary vocational programmes lasting for three years. A teacher, the student and a workplace tutor draw up an individual work-based learning study plan before or at the very beginning of the work-based learning period. The work-based learning plan is a part of the student's individual study plan whereby formal and informal learning takes place. Hence, work-based learning is provided in cooperation with an employer based on a general agreement signed by the parties. It is planned and guided on the basis of the objectives of a standardised curriculum. Student support and guidance to facilitate a student's own career prospects is also a key element of this example. Explicit and tacit knowledge should be acquired.

Case 6 Pirkanmaa Vocational Institute network: The case delineates efforts by several Vocational Education and Training (VET) providers and working life representatives to develop regional cooperation in work-based learning. By using the synergies of different stakeholders it is the aim to create common tools, procedures, forms such as work-based learning portals and/or projects. Moreover, the network develops occupational safety standards, provides courses for workplace instructors and teachers, develops and tests different models to train the instructors and develops work-based learning for those students who need special support for their learning. The case illustrates an institutional learning process, so that guidance for students does not take place. But the network depends similarly on an agent being responsible for initiating processes and motivating the stakeholders. The sharing of explicit as well as tacit knowledge between the partners is crucial to foster innovation processes.

Case 7 MBO Netherlands: The case study describes the Dutch apprenticeship system offering two learning pathways: one being school-based and the other work-based. The work-based pathway combines four days of working in the week with one day within college. But there are different models depending on the branch. In this context, eighteen branch based expertise centres and the VET-Colleges are together responsible for VET. 'The expertise centres are in charge of the requirements (the "what") and the Colleges of the programs (the "how").' The institutional autonomy of VET colleges allows them to follow innovative learning pathways being eventually required to meet national quality standards. Two work-based learning projects at school level are given for illustration: One targets to reduce early school leaving and the other project wants to integrate socially excluded groups by making use of tailor made learning pathways. Both projects emphasise flexible learning approaches, labour market oriented training, stakeholder relationships and student guidance.

Case 8 student 3s: The case illustrates the significance of professional internships within structured degree programs at the University of Applied Sciences Technikum Vienna (Fachhochschule). Professional internships last 12 to 15 weeks and aim to bridge the gap between theory and practice. At the core of the example is a project plan determining work tasks to be fulfilled. An educational contract is signed and deadlines are agreed upon by the respective stakeholders. The example highlights the value of a functioning stakeholder relationship to facilitate a better labour market integration of students. Student guidance is provided by an academic and a company tutor.

Case 9 vocational school TFBS/EKE Austria: The case refers to the Austrian dual system where phases of work at companies and classroom teaching do rotate for a three to four years period. Each year the students are nine months within companies and for nine weeks they attend the vocational school to learn theories and acquire practical skills. In order to integrate work-based knowledge into its school curriculum, the vocational school carries out a job analysis with companies every five years. In the third year of apprenticeship students are also expected to join projects solving real-life problems, e.g. an innovative project for measuring the temperature at a rectification

construction. In such projects student guidance has a key role to play. Otherwise, the case study provides an illustration of guidance at institutional level. So-called future forums ('Zukunftsforen') consisting of teachers do carry out planning activities. The job analysis is an example of their activities. Future forums adapt the school agenda to technical and other innovations. They can be seen as the link between the school and the company world. Moreover, a constant exchange of information between all stakeholders is emphasised.

The above illustrated examples of work-based learning all fit into the definition presented within the previous chapter emphasising mutually benefiting stakeholder relationships, workplace orientation, structured knowledge transfer/formal education, explicit and implicit knowledge and student and/or institutional guidance. However, the case descriptions tend to focus on formal learning at the expense of informal learning and unintended learning processes.

This might result out of the fact that the case studies were provided by institutional partners being engaged in planning of work-based learning. For instance, the brainstorming exercise at the first transnational meeting casted doubt whether informal and accidental forms of learning should be concentrated on. The following definitions on work-based learning are indicative:

'A learning process managed by a tutor with large working experience but also with excellent communication skills.

An accelerated learning method to understand and to operate the requirements of some equipment.

A methodology of transfer of skills and attitudes based on WP requirements, for a specific occupation.

Any process of learning which occurs inside the enterprise (I'll leave out other settings), which can be formal or not formal, but I would restrict the analyses to the intentional processes.'

To overcome conventional dualities between theoretical and practical knowledge or between formal learning as being 'context independent', 'abstract' and 'transparent' and informal learning as being 'context dependent', 'concrete' and 'based on intuition', it would be necessary to emphasise more clearly the role of informal and accidental learning at workplaces. To go beyond the dichotomy of formal and informal learning would come closer to what Billett referred to as 'knowing-in practice' or 'practising becomes a knowledgeable activity'.¹⁹

The interrelation of formal learning at an educational institution and informal learning at the workplace is well exemplified by the stakeholder relationships within the examples. Thereby, a knowledge transfer from the classroom to practice and again from the workplace to the school can be facilitated. The issue of guidance, therefore, certainly gains in terms of importance, otherwise knowledge cannot simply be transferred. It will also be necessary to foster dialogue and common reflection to transform part of the implicit knowledge into explicit knowledge.

'Explicit knowledge can be expressed in words and numbers and shared in the form of data, specifications, manuals, product descriptions, and alike. This kind of knowledge can be transmitted formally and systematically between individuals. Tacit knowledge is highly personal and difficult to formalise, making it difficult to communicate or share with others. Subjective insights, intuitions, and hunches fall into this category of knowledge. Tacit knowledge is deeply rooted in an individuals actions and experience as well as in ideals, values, or emotions he or she embraces.'²⁰

Hence, by intense dialogue and socialisation implicit knowledge can be made explicit. By the use of metaphors, diagrams and models explicit knowledge can be synthesised further to create more complex knowledge. This process of refinement increases the value of practical knowledge. Eventually a process of internalisation can transform the explicit organisational knowledge again into the implicit knowledge of the individual. Nonaka and Takeuchi describe these four phases as

¹⁹ Butler (2009): Servicing the horseracing industry: apprenticeships past and present. University of Warwick, mimeo.

²⁰ Seufert (2000): Work-based learning and Knowledge Management: An integrated Concept of Organizational Learning). is2.lse.ac.uk/asp/aspecis/20000126.pdf (7.7.2009).

socialisation, externalisation, combination and internalisation, thereby delineating the spiral process of knowledge creation. In the context of work-based learning, Seufert notes that 'work-based learning differs from conventional training in that it involves deep and conscious reflection on actual experience at the work place'.²¹

One could go a step further and argue similarly that the difference between the practice of work-based learning and good practices of work-based learning depends upon the degree of making implicit knowledge explicit and transforming it again into implicit knowledge of a person. Given the focus on the workplace within concepts of work-based learning and the great significance of implicit knowledge at the workplace, it is hence necessary to reflect such knowledge and make it explicit (as well as eventually implicit again). This will again depend on the interplay of different stakeholders across various levels. The cases show already the complex relationships between persons, companies, VET providers, public and private consultancy and research organisations and other state agencies such as ministries.

2.) Criteria for identifying good practices of work-based learning

The previous chapter described practices of work-based learning delivered by the project partners based on the definition developed by the partners and literature research. The aim of the project, however, is not only to provide examples of work-based learning, but to show examples of good practice of work-based learning.

At the transnational meeting in Vienna the following criteria were named to identify good examples of work-based learning.

- Stakeholder relationships
'Network solution or partner solution.
Triangle student, company and school supported by modern means of communication.
Communication pathway: enterprise, school, student.
A useful good practice (GP) is important for a student, an instructor, and employer, a teacher, and for an education provider.
Social consensus on it, which depends mainly on: Involvement of the stakeholders and all the actors of the learning process.'
- Workplace orientation
The good practices have to be focused on the point of view of the enterprises.
The needs of enterprises should be considered.'
- Student focus
'Students find ways for solving problems by themselves.
Students' self-responsible working and learning'
- European orientation
'It's based on the European legislation or on a common practice or rules.
If it contributes to increasing European transparency and cooperation mobility.'
- Structured knowledge transfer
'Good example. Make transferability in a different context. Clear and simple. Make change in the 'mind' of organization.
You can argue the GP with practical experiences and theoretical points of view.
It makes the WBL providing more systematic and easier to carry out.'

²¹ Ibid.

- Effectiveness and efficacy
‘To be effective from a rapid command of the workplace requirement point of view.
To be effective from skills transfer point of view.
It should improve the situation compared to the current state of matters.
Results, in terms of competences achieved/developed.
Innovative, sustainable, problem-solving’
- Sustainability
‘Sustainability, applicability, it can be measured.’
Innovative, sustainable, problem-solving
I have been rested and preliminary evaluated (maybe once/twice repaired).’
- Innovativeness
‘Sustainability, applicability, it can be measured.
Innovative, sustainable, problem-solving’
- Measurability
‘Sustainability, applicability, it can be measured.’
- Evaluation
‘Reviewed, assessed.
It is valued as an important practice or a critical point of providing WBL’

The criteria provided at the first transnational meeting are certainly useful for identifying good practices. Nevertheless, some criteria are rather a description of features of work-based learning than good practice criteria. The same reveals a closer look into the case studies. The partners drafting the case studies were asked to provide information on criteria for identifying good practices related to their specific examples. The following information has been extracted from the cases:

Case 1 Mastertrad Skillab: Criteria of good practice are effectiveness, efficiency, responsiveness to company needs, reproducibility and transferability. ‘Further criteria that guide the selection of Good Practices are: the level of innovation of experiences, their capacity to be reproduced for similar problematical situations, their capacity for being used as a model for diverse problems from those for which they were conceived’²².

Case 2 Tutortrad Skillab: Good practice criteria are viewed in a pragmatic way: ‘The training project, realized experimentally in 2007, is now even requested by other industrial sector contracts. Moreover, the realisation of the experimentation of the modules dedicated to the training of the tutors is in course, still co-designed with a great sharing of ideas between those with community roles²³’. In addition, criteria such as innovativeness and flexibility are emphasised.

Case 3 Fiatest Non-Formal: Criteria of good practice are seen in quality assurance, use of IT technology, certification of trainers and the involvement of employers.

Case 4 Fiatest Formal: The case notes clear general and particular objectives, certified assessors, quality management systems and a new occupational standard for the tutor’s occupation as criteria of good practice. Also, yearly measurement of the elements of the PDCA circle using various measurable criteria.

²² Mastertrad case study (2009): 6.

²³ Ibid.

Case 5 Pirkanmaa Vocational Institute systematic WBL process: Criteria for being regarded as good practice are the systematic integration of stakeholders, the systematic work-based learning process, a student focus, the use of client-satisfaction indicators to measure goal achievement, an emphasis on quality assurance, assessments and the labour market integration of students after the work-based learning period.

Case 6 Pirkanmaa Vocational Institute network: The case study refers to the number of projects which has increased as well as to evaluation and documentation of projects. Other good practice criteria are the integration of labour market representatives, benchmark setting or work-based learning portals. It is also very important to have a motivator, an initiator and leader for the cooperation.

Case 7 MBO Netherlands: Good practice criteria are seen in a clear description of goals, a focus on outcomes, close cooperation between stakeholders, the integration of company needs, measurability, constant evaluations, reflection, measurability, innovative learning beyond the status of pilot projects, tailor made approaches, structured reporting and guidance.

Case 8 student 3s: Criteria for identifying good practices are related to a functioning stakeholder relationship, a clear set up of goals to be achieved, the success of the internship measured by labour market integration, the increasing number of students and placements, predefined assessment procedures and the fact that the EQF model has been taken into consideration.

Case 9 vocational school TFBS/EKE Austria: Good practice criteria are seen mainly in a lively stakeholder relationship, the practice of the job analysis, the outcomes of exam results and the development of innovative work-based learning projects.

Similarly to the identification of criteria of good practices at the first transnational meeting, the case studies do provide a mix of work-based learning features and good practice criteria. New features and criteria would be the following:

- Flexible learning
- Tailor-made learning
- Use of IT technology
- Systematic processes and procedures
- Clear goal setting and outcomes
- Quality assurance
- Certification
- Labour market integration
- Client satisfaction
- Guidance
- Reproducibility
- Transferability

Due to the multitude of criteria mentioned, it is certainly not possible to derive an unambiguous set of criteria to differentiate work-based learning practices. But it makes sense to redefine criteria which are only providing descriptions of work-based learning features such as workplace orientation, student focus, guidance, stakeholder relationship, systematic knowledge transfer and alike. Instead of providing only a description of work-based learning, proxies for their degree of fulfilment might be used. Furthermore, criteria such as use of IT technology are not specific of work-based learning. Reproducibility and transferability can also not be seen as criteria for good practices, since it is not automatic that a work-based learning practice needs to work in another context. Criteria such as labour market integration or client satisfaction can be subsumed under the criterion effectiveness.

The following criteria are suggested to be viewed as key criteria for identifying good practices:

- **Mix of stakeholders**
Work-based learning should integrate key stakeholders within a standardised curriculum. Hence, it is important to establish a mix of teachers and practitioners from the business world. Work-based learning has to accomplish that the educational institution, the employer and a learner participate.
- **Degree of integration of stakeholders**
The way the stakeholder are getting integrated in work-based learning is at the heart of a good practice. The question is whether the main stakeholders are all integrated within a formal curriculum. Furthermore, does the involvement of stakeholders take place in the form of a consultation or are they regularly involved in the process of development of work-based learning.
- **Standardisation**
The degree of standardisation or institutionalisation is central for work-based learning. Similar teaching inputs and learning outcomes of formal education are important to signal the value of certificates. The question is how convincing can learning outcomes of work-based learning be externally communicated to employers.
- **Effectiveness**
Effectiveness can be related to various goals and gives information regarding the degree or quality of achievement. Hence, effectiveness of work-based learning can be defined in terms of students finding jobs or in meeting client satisfaction (in particular satisfaction of students and companies). Within the case studies effectiveness plays a vital role at the example of 3s (case study 8) where evaluations are carried out whether professional internships fulfill its purpose of facilitating a better labour market integration. The example of systematic work-based learning process at Pirkanmaa Vocational Institute similarly refers to labour market integration and client satisfaction measurement.
- **Adaptation**
Curricula of work-based learning need regularly to be adapted to the working environment. The workplace orientation can only be guaranteed by constant improvement of formal curricula. Especially in the case of a dynamic occupational field such cycles of improvement are vital (e.g. high deployment of modern technology causes fast changes within work processes).
- **Sustainability**
Sustainability refers basically to the duration and/or stability of an example of work-based learning. Most examples delivered cannot be described as sustainable, since the time span has been too short yet. For instance, one could argue that for the cases from Skillab or the network at Pirkanmaa region sustainability is an important criterion to be achieved for the future. Systemic descriptions such as in the case of the Netherlands and Romania are anyway difficult to evaluate in terms of sustainability.
- **Measurability**
Measurability is certainly an important criterion for all the work-based learning practices, since quantification of the outcomes and results is a key issue of work-based learning. Work-based learning is output oriented. Examples pertain to the measurement of goal achievement, learning success, client satisfaction or labour market integration.

- **Quality**
The dimension of quality has a central role, because the project aims to assure the quality of work-based learning. Hence, all the case studies are referring to the quality dimension of work-based learning.
- **Innovativeness**
Innovativeness is probably the criterion most often named in relation to the case studies. All the cases intend to show new and innovative practices. While the dual system in Austria is a well-established system, the case of TFB/EKE also illustrates innovative elements of work-based learning which go clearly beyond what needs to be done.

In the course of the project further examples of work-based learning might be included to allow for an enlarged selection of good practices. The examples so far included do focus mainly on aspects of the mix and degree of integration of stakeholders, standardisation, quality and innovativeness, while effectiveness, adaptation, sustainability or measurability are not at the heart of the described practices. The criteria just mentioned should facilitate to choose further good practices.

3.) Three different plains: Planning, innovative stakeholder practices and quality assurance

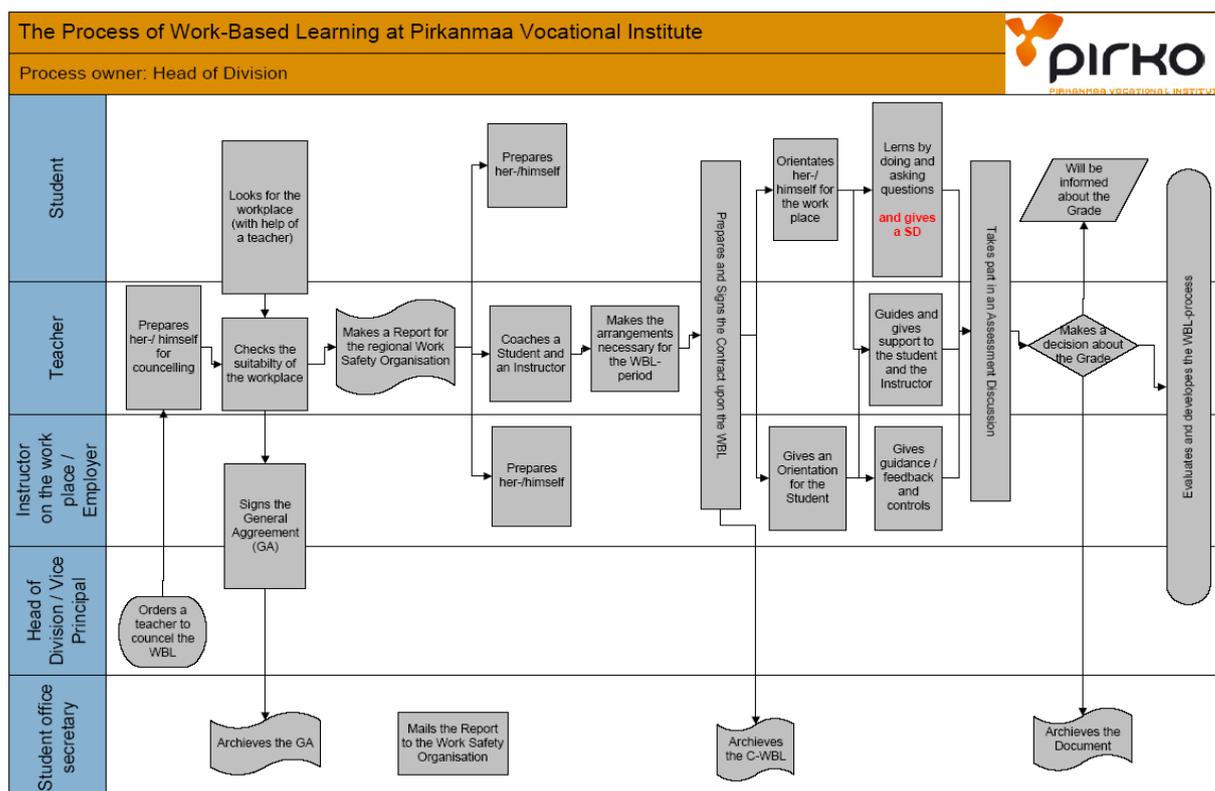
The project aims not only to select good practices of work-based learning, but to concentrate in particular on the planning of work-based learning. Also, the good examples of planning of work-based learning should fulfil high quality by making use of some sort of quality assurance. The Common Quality Assurance Framework (CQAF) is proposed as a reference to assuring good quality.

Despite the common features described in recent chapters (such as mutually benefiting stakeholder relationships, workplace orientation, structured knowledge transfer, explicit and implicit knowledge and student and/or institutional guidance), the provided case studies do differ considerably from one another illustrating a wide array of possibilities regarding work-based learning. This is most obviously visible in their different focuses in terms of the level of description – focus on human actors, organisations or systems. A closer look unveils as well that some examples concentrate more on the planning phase of examples of work-based learning, others focus more on a description of innovative stakeholder practices of work-based learning and others again concentrate more on the quality assurance aspect. In this sense, good practice is mainly related to planning of innovative examples of stakeholder relationships, description of innovative stakeholder practices of work-based learning and assuring their quality. Moreover, the examples are not exclusive descriptions of planning of work-based learning. Planning always refers to other phases of the CQAF (implementation, evaluation and review).

Concentration on the planning phase of work-based learning:

The example ‘systematic WBL process in Pirkanmaa Vocational Institute’ is a good practice focusing mainly on the planning phase of work-based learning. The process plan clearly identifies elements of the example of work-based learning. Also, the roles of the respective stakeholders are described related to planning (e.g. the teacher prepares himself/herself for counselling, checks the suitability of the workplace, makes a report for the regional safety organisation, coaches the student and instructor, makes necessary arrangements for work-based learning period, prepares and signs a contract), implementation (e.g. teacher guides and gives support to the student and instructor), evaluation (e.g. teacher takes part in assessment discussion, makes a decision about the grade) and review (e.g. teacher evaluates and develops the work-based learning process). In addition, a plan for organising a skills demonstration is exemplified. Hence, the example of work-based learning

provides for a detailed description of the planning phase of the good practice and a broad description of the example of good practice itself (purpose, roles of stakeholders, assessment of learning outcome). Besides, information concerning quality assurance (through following descriptions, directives and forms as well as evaluation of these by using inquiries, data base analysis and trend analysis) is outlined.



Source: Case Study 5

Figure 1: Process of work-based learning Pirko

The example of ‘development of regional cooperation via the work-based learning process with other vocational education and training providers and working life representatives in Pirkanmaa Province’ focuses as well largely on the planning phase of work-based learning. The following phases are planned for: The candidates for planning a project are surveyed, a project plan is set up, an application for funding is made, a project organisation is set up, a kick of meeting takes place, results are reported and evaluated and finally a plan for further cooperation and dissemination is made. Description related to the example of good practice itself is also provided abundantly, even though resembling the description from the previous example (case study 5). Consequently, the information concerning purpose, roles of different stakeholders and assessment of learning success focuses only marginally on the institutional members of the cooperation or the project being carried out. Eventually a detailed outline of quality assurance (systematic and goal oriented cooperation, benchmarking setting, use of IT to foster information sharing) is given again.

In the example of planning of work-based learning at the vocational school for electricians and electronics technicians in Austria there has been placed also the planning process of work-based learning at the heart of its description. The example of the job analysis by using a questionnaire is certainly a planning exercise. The students record the most important activities in their job environment, which acts as the basis of a questionnaire for the companies. The results of the data analysis are used for the school curriculum. In addition to the description of the planning phase, a

detailed description of the example of good practice itself (purpose, roles of stakeholders, assessment of learning outcome) is provided for at an institutional (school) level and at project level. Thus, a specific example of carrying out work-based learning, a practical training for measuring the temperature at a rectification construction, is included within the description of the case study. So-called 'Zukunftsforen' (future forums), where teachers discuss innovations for training and the school curriculum, are portrayed to be the nucleus for such projects. These forums are also central for quality assurance. Another innovative example related to quality assurance is the participation within a peer review exercise.

Table 3: Process description of planning a professional internship

Task	Who	Tools, detail	Result
Acquisition of internship places	Head of Department/Student's own initiative	Current list of companies, contacts, quality requirements according to application (Document: "Guideline for professional internship")	List of available places fulfilling the appropriate requirements
Application	Student	List of available places	Confirmation of internship place
Choice of UAS supervisor	Proposals from student, Head of Department	Expertise of teaching staff, consideration of competing circumstances	List of student, company and topic supervisor
Approval of internship	Head of Study Programme	Guideline for the internship (Document: "Guidelines for professional internship")	Approval
Start of the internship semester, definition of tasks (Document: "References to internship")	Student and supervisor	Guideline for the internship (Document: "Guidelines for professional internship")	Project plan
Continuous assessment of project progress	UAS-supervisor, company supervisor	Progress reports, communication with company supervisor and student	Ensuring the quality of the professional internship

Source: Quality Handbook of Fachhochschule Technikum Wien

The example from 3s Research Laboratory aims to provide another good practice of work-based learning with a special emphasis on the planning phase. The single process elements of this practice are well defined by the respective stakeholders. At the centre of the example of a professional internship at a university of applied sciences in Vienna is a project plan whereby a student and his supervisor agree on tasks to be fulfilled in the course of an internship. The student either searches himself for a company for his internship or some institutes do provide a list of companies and contacts. Eventually an agreement is reached between student, university of applied sciences and the company upon the goals of the internship. Figure 4 illustrates planned steps to be taken before the start of the professional internship and related to the implementation phase.

The evaluation and review phase of the example of work-based learning is planned for in the same fashion (figure 5). After the completion of the internship a report is compiled and an assessment is carried out. In addition, student and company feedback on the internship is gathered. Ultimately, a presentation on the internship is undertaken by the student at the university of applied sciences.

Table 4: Process description of planning a professional internship

Completion of professional internship	Student	Form: Instructions for composition of an internship report (Document: " <i>Internship report</i> ")	Report on professional internship (Document: " <i>Release of internship report</i> ")
Evaluation of professional internship	Students, UAS-supervisor, company supervisor	Evaluation form (Document: " <i>Assessment of professional internship</i> ", " <i>student feedback on professional internship</i> ", " <i>company feedback on professional internship</i> ")	Company feedback (Document: " <i>Company feedback for professional internship</i> ", " <i>student feedback on professional internship</i> ")
Presentation of internship semester	Student		Acknowledgement of internship

Source: Quality Handbook of Fachhochschule Technikum Wien

The example delivers further a broad description of the practice of work-based learning itself (purpose, roles of stakeholders, assessment of learning outcome) and explains the quality approach in use (internships were integrated within the overall quality management system being essential for accreditation of degree programs, EQF acts as benchmark for study programs).

Concentration on a description of innovative practices of work-based learning:

The example of work-based learning from the Netherlands is a good practice of work-based learning at a systemic level. There is little information concerning the planning process given that it varies from school to school. Two examples of work-based learning at school level are provided for, but they do not include information on the planning phase. However, the example is a very illustrative description of an innovative practice of work-based learning based on features at the macro level. The combination of national quality standards guaranteed by branch based expertise centers and high institutional autonomy of the VET colleges allows to create tailor made learning pathways. Thereby, innovative learning pathways beyond the status of pilot projects can be achieved to avoid exclusion of certain groups. For instance, the provided example of Albeda college aims to reduce early school leaving by concentrating on employment oriented training and practical training in work settings in combination with a individual education plan, special needs support structure, youth care and cooperative education. Hence, the work-based learning programme is highly flexible targeting groups with specific needs. Apart from the detailed information on purpose, stakeholders and to a lesser degree assessment of learning outcomes, the case gives also some information on quality assurance (increasing use of ICT, planning-control cycle).

The example of the Master's degree in project techniques and methods from Skillab is another description of innovative practice of work-based learning. The program feature of becoming employed upon selection to the program is certainly an innovative practice. Also, the strong connection of entrepreneurs and trade unions in the course of the project is an innovative practice. However, there is not much information on the planning phase apart from the fact that university professors from Turin Polytechnic, the companies and experts from Skillab were involved in initial programming. In addition to a description of purpose, stakeholders and learning assessment, the case study provides a thorough outline of the quality approach in use (description of accreditation system for Italian university courses, evaluation models for different levels of university training, key aspects of formative programs).

The @pprendo project provides in a similar fashion a description of innovative stakeholder practice. @pprendo offers flexibility in the choice of contents and didactic format, it experiments with training at a distance, it represents important system action and it is a powerful sharing instrument. Still, information regarding the planning phase is limited: A pool of experts from four thematic areas, each having a reference person, in combination with a general coordination carried out by Milan Polytechnic and the Italian Federation of Metallurgical and Mechanical Trade Unions, have been responsible for the realisation of the project. Furthermore, ‘the @pprendo project is the result of a sound bilateral cultural experience on the part of those with community roles. It started out, in fact, from a great sharing of ideas in a meeting around a technical work-table (the National Joint Committee), of which AMMA/Skillab are a part²⁴. Apart from a detailed description of purpose, stakeholders and assessment of learning outcomes, the case study provides little information regarding the quality approach in use (quality assurance is not in place, each company has its own training system).

Concentration on the quality assurance aspect of work-based learning:

The case study on the formal and informal sub-system of CVT in Romania is similarly to the example from the Netherlands a systemic description of work-based learning. The two pathways, authorised trainings programs (curriculum) and work-based learning validated by competence assessment centres are having as well points of intersection, so that a strict division between those subsystems is hardly possible. Still, the two pathways are distinct given that the formal subsystem focuses on people from general secondary school or university/polytechnic studies in a training environment with trainers, curriculum and school/training centre and the non-formal/informal subsystem focuses on adults having some occupational experience aiming to qualify their competences being validated by an official recognition. But both subsystems are based on a national occupational standard, so that the aspect of assuring quality features prominently within the example. For instance, the purpose of formal CVT is to increase the competences of adults by offering them authorized training programs by training providers. Similarly, the purpose of non-formal/informal CVT is to measure and validate, within specialised competence centres, competences specific to an occupational standard. A description of the stakeholders (NATB, authorized trainers and certified assessors, occupational standard for tutors) and assessment (different types of assessment in formal CVT, assessment instrument within non-formal CVT) do explain as well in depth issues related to quality assurance. Also, the description of the planning phase is concerned with quality aspects of work-based learning: The actors involved in designing curriculum and assessment centres are the official bodies asking official authorization. In relation to quality assurance the case study provides further illustrative examples such as the PDCA circle, a systemic approach to quality assurance and certification against ISO9001/IWA2 standard.

4.) Elements of good practice of work-based learning

So far a definition of work-based learning, criteria for identifying good practices of work-based learning and an outline of the structure of the examples of work-based learning was given. Thereby a lot of information on the question of ‘What is work-based learning’ has been provided. Comparatively little information was provided regarding the question of ‘How is work-based learning carried out’. In the following, a grid will be presented allowing to describe the ‘What’ and ‘How’ of work-based learning. The aim is to offer a method to describe the structure of the practices beyond the tripartite structure just delineated (planning, innovative example description and quality assurance) and provide also information of the process of work-based learning.

²⁴ Tutortrad case study (2009): 6-7.

Thus, the grid allows to describe in a short and still complex way an example of good practice including purpose, stakeholders, process elements, outcome, learning assessment as well as the context of an example. Information concerning the planning phase and the quality approach are provided separately to allow for an unambiguous interpretation of the example. Also, information regarding criteria of good practice and possible obstacles are cited. To sum it up, the grid would allow for a convenient identification of elements and facilitate a discussion on transferability of various elements dependent on the context. To produce a manual for the transferability of an example into another context is one of the goals of this project. The following descriptors for the case studies were used (see also appendix 1):

- Context of the example
- Description of the example
- Purpose
- Stakeholders
- Process elements
- Outcome
- Learning assessment
- Information concerning the planning phase
- Quality approach
- Good practice criteria mentioned
- Obstacles

The appendix 1 exemplifies the use of the grid for the provided case studies. All the citations used are taken from the case studies.

However, it might not be possible to transfer all the elements of a work-based learning example into another VET environment. To facilitate a transfer of certain elements into another context, it would be necessary to identify key elements of the case studies.

For instance, the individual work-based learning study plan in the case of ‘systematic work-based learning process in Pirkanmaa Vocational Institute’ can be viewed as a key element. The individual study plan includes learning objectives, tasks at the workplace, a plan for introduction, counselling, assessment and a skills demonstration. The ‘Mastertrad’ example from Skillab emphasises the combination of employment upon entering a master program in combination with a training course. The @pprendo project relies greatly on the use of a learning platform and emphasises creative networking of unions, education providers and companies. The vocational school for electronics from Austria illustrates the use of surveys, pro-active teachers and exchange platforms to integrate up to date corporate knowledge into school planning. The example from 3s highlights the use of a project plan to agree on learning outcomes and set up of a contractual agreement to define the role of respective stakeholders. The example from Fiatest emphasises the importance of an occupational standard as well as official authorization of training providers and assessment centres. MBO Raad illustrates the value of having institutional autonomy to carry out programs, while being bound by the requirements of regional expertise centres and finally the ministry of education.

Appendix 2 provides some answers by the partners regarding key elements of their case studies.

5.) Transferring good practices of work-based learning

Previous chapters provided a definition of work-based learning, criteria for identifying good practices of planning work-based learning and a grid to operate the identification of planning of work-based learning and assuring its quality. The grid emphasised as well the importance of the context of examples of good practice.

The specific context of an example needs to be taken into consideration. Often it is the context which determines whether a practice succeeds or fails. For instance, the Austrian example of professional internship by using contractual agreements and a project plan to determine responsibilities can only be viewed as an innovative example taking into consideration the dynamic development of the sector of universities of applied sciences and their well established network with high performance companies. The success of this practice depends ultimately on the employability of former students. In a stagnant economic environment with non-competitive companies project plans in combination with contractual agreement might be interpreted as a rigidity restricting corporate freedom. In the case of Austria contracts facilitate mutual coordination of the needs of students, education provider and companies embedded within a dynamic economic setting.

The boundary between the context and a practice is not entirely clear. 'Therefore, the evaluation of a practice should produce knowledge of the resources that have to be mobilised when implementing a practice and the change that can be achieved by the practice. It is not the practice itself but rather knowledge about it that can be transferred (such as descriptions of good practices).' It demands for a good practice process of 'identifying, evaluating and condensing good practice, analysing it critically and validating it through dialogue and promoting its implementation. This is not always a linear process.'²⁵

The analysis of good practices of work-based learning should finally give operative partners answers on how to choose good practices of work-based learning, to help with the identification of preconditions and challenges of the implementation of work-based learning and to clarify the phases of the transfer process. The following questions and issues will be dealt with in order to offer a manual for transferring good practices of work-based learning:

- What to transfer?
- Why to transfer good practices of work-based learning?
- Who is benefiting from the transfer?
- Who is carrying out the transfer?
- Contextualisation of the example
- Project management
- How to go on in terms of implementation, evaluation and dissemination?
- Obstacles
- General conclusions

Those questions have been worked out at the second transnational meeting in Rome and will be dealt with in the course of the work package two. The guideline might eventually be piloted and validated during the project once a real transfer of work-based learning practices between partners takes place. The results of this process should be documented and disseminated.

²⁵ <http://www.sosiaaliporrti.fi/en-GB/goodpracticetheory/> (10.7.2009).

D.) Appendix

1.) Elements of innovative practices of work-based learning

In the following pages, the grid from chapter 4c will be applied to the case studies delivered by the partners.

	Skillab Case 1 Mastertrad
Context of example	‘The project realized by SKILLAB and the Turin Polytechnic, financed by the Piedmont Region in the context of the “ <i>Announcement of competition for the experimentation of apprenticeship training courses</i> ”, and co-financed by the European Union, represents a new opportunity of immediate employment and specialized training after graduation.’
Description of example	Master programme at tertiary level (project techniques and methods, production systems) with employment status. The example is labour market oriented, combining a university degree with WBL.
Purpose	Meet company needs' within changing economic environment. Job profile of a generalist combining technical and business knowledge.
Stakeholders	Skillab, Turin Polytechnic, companies, industrial unions, students. Financed by Piedmont region and EU.
Process element	Selection of students for 24 months study course (younger than 30 years). Companies employ students on a permanent contract basis. Contract in the form of advanced apprenticeship provides for lower entrance salaries compared to market wages for engineers. 16h per week for 11 months training (theory, lab, activities) at Turin Polytechnic. 18 months training on the job and project work within companies; company tutors available. 80h training at Skillab (social and management competences, economics, English).
Outcome	10 students participated in a first round, all got a job at the training enterprise.
Learning Assessment	Students: Activities within companies by the use of reports from academic and company tutors. In addition, tests at Skillab and Turin Polytechnic.
Information concerning planning phase	‘University professors from the Turin Polytechnic, the companies that would have employed the students and experts from SKILLAB were involved in the initial programming.’ ‘By structuring the organization of the activities according to thematic technical discussion tables that involved experts who, on a regular basis, met one another in order to plan and allocate the monitoring of the different stages of the project. The link with the company tutors was very important for the projects.’
Quality approach	‘The promoters of the project are the ‘assurers’ of the quality; that is to say, the Turin Polytechnic (with the most important engineering faculty at a national level), Skillab and the companies themselves. The Piedmontese Region and the Ministry of Labour are involved in the qualitative, quantitative and economic monitoring; both intermediate and final.’ Legislation documents modalities of accreditation/evaluation and proposes a guide (training model for quality management) to show objectives, processes and results.
GP criteria mentioned	Effectiveness with respect to problems; to be put into practice effectively; reproducibility; transferability; level of innovation (didactic, creation of new job profile, partnership). Responsiveness to company needs.
Obstacles	The spheres of university, training and companies have diverse linguistic-cultural codes and references. Public funding procedures were cumbersome for companies given that they are not used to this sort of funding. Small number of students (10): High resource impact on study programme.

Skillab Case 2 Tutorrad	
Context of example	<p>‘@pprendo project is the result of a sound bilateral cultural experience on the part of those with community roles. It started from a sharing of ideas in a meeting around a technical work-table (the National Joint Committee), of which AMMA/Skillab are a part.’</p> <p>‘Ministry of labour and social security promotes collaboration between National Commission for Continuous Training and Apprenticeship of the engineering industry and the installation of facilities, one of which is Skillab, with the aim of promoting quality of professional apprenticeships.’</p>
Description of example	Flexible system of didactic courses related to transversal training of professional apprenticeships. Thematic areas (organization and economics, work relationships, safety, relational competences) were set by national collective agreements. Project is designed especially for small and medium enterprises with having difficulties of providing the respective skills. Use of IT technology.
Purpose	<p>Carrying into effect national collective labour agreement for professional apprenticeships in the engineering industry and installation of facilities.</p> <p>Offer smaller companies with training capacities, especially in peripheral locations, an instrument to organize training activities on transversal themes.</p> <p>Research and identification of logistical solutions to offer a uniform level in training allocation; develop instruments for supporting company tutors; implementation of pedagogical/organizational models allowing maximum adaptability; define standards of evaluation; study technical specifications</p>
Stakeholders	Milan Polytechnic, Skillab, students, companies including tutors. Financed by Ministry of Labour and Social Security.
Process element	<p>Integration of formative experience in companies and classrooms. Constant communication between @pprendo, apprentices and companies. Insertion of young people into working world. Training contract between company and apprentice.</p> <p>Initial period of work with representatives of company to learn about specificities and transmit project objectives.</p> <p>In a second phase the training project is refined on basis of needs of apprentices. Afterwards apprentices can be inserted in a course combining company objectives and personal aspirations of apprentices.</p> <p>Training of company tutor is included. Training on transversal themes adds 60 extra hours to the foreseen hours of professional training. 100h of training are offered to allow for flexibility. E-learning platform is an crucial element given the focus on distance learning. Multimedia materials (lessons, in-depth studies, quizzes, practices) are provided by a platform.</p>
Outcome	Training project started in 2007 and is now also requested by other industrial sector contracts. Engineering industry accounts for 60,000 enterprises and 1.65 million employees. Spin-offs of this project could carry into effect the collective labour agreement for the apprenticeship for a huge sector.
Learning Assessment	Online study material is used for assessment. ‘The learning platform foresees that the company tutor not only verifies, at every moment, the progress of the apprentice’s studies, his/her course attendance and exams taken, but also, in accordance with the results, personalizes from time to time the apprentice’s course.’
Information concerning planning phase	‘The @pprendo project was realized by a pool of experts from 4 thematic areas; each single area having a reference person and the general coordination being carried out by the Milan MIP and the Italian Federation of Metallurgical and Mechanical Trade Unions.’
Quality approach	‘Quality planning is not foreseen. The objective of the project is to offer high quality training whilst bearing in mind that each company has its own quality system which it applies to its own reality.’
GP criteria mentioned	Functioning partnership between companies and training institutions is viewed as central. Innovativeness of project: carries into effect collective labour agreement; powerful sharing element; flexibility in terms of choice of contents and didactic format; experiments with training at a distance.

Obstacles	
	Fiatest Case 1 Non-formal
Context of example	Romanian VET system has 3 subsystems each having a specific legislation: apprenticeship by ministry of labour, IVET by ministry of education and CVT by national adult training board (NATB). NATB has tripartite structure (state, employers, unions)
Description of example	Non-formal / informal CVT competence assessment centres to evaluate knowledge, skills and attitudes. Necessary due to the lack of qualified workforce in Romania and the lack of time, many of the workforce will have to attend CVT programmes.
Purpose	<p>'The purpose of the NON-FORMAL /INFORMAL CVT subsystem is to measure and validate, within specialized Competences Centres, all competences units specific to an Occupational Standard or only some competences.' WBL component of 2/3 to guarantee occupational standards.</p> <p>The NON-FORMAL CVT is focused on people who have some occupational experience obtained by practising a job in a company, who want to improve their skills (eventually by using a tutor) and who want to obtain an official recognition on behalf of a nationally recognized body.</p>
Stakeholders	Competence assessment centre, candidates, certified competence assessors, employer of candidate.
Process element	<p>NATB authorizes assessment centres, certified competence assessors assess candidates' competences.</p> <p>'Studying the Occupational Standard, supported- if is it necessary- by a tutor (appointed by the employer, eventually in consultation with the assessment centre) or/and by participating (partially) – to a FORMAL Training Program.' 'A self assessment according to the requirements of the Occupational Standard.</p> <p>'Participation to an official assessment for all competence units or only for some competence units. In the case of the non validation of the required competences, the process goes on for obtaining the necessary knowledge/skills.' Assessment can be combined with training activities for competences which were not fulfilled. Assessment results can be "QUALIFIED" or "NOT YET QUALIFIED".</p> <p>'For the NON-FORMAL/INFORMAL training system: 42 authorized Competences Assessment Centres for 62 occupations and 38 qualifications.'</p>
Outcome	<p>Assessment is performed by an assessor certified by NATB and nominated by the assessment centre.</p> <p>Assessment using written tests, interview, observation card, report from third parties, practical work, works' portfolio, practical demonstration.</p>
Learning Assessment	<p>The actors involved in designing the curriculum are the assessment centres (for NONFORMAL training) asking for official authorization.</p> <p>To be authorized, they have to develop assessment instruments (Competencies Assessment Centres) in relation to an official occupation linked to the COR-Romanian Occupation Classification and covered by an Occupational Standard. Sometimes the employers are involved in this process.</p>
Information concerning planning phase	<p>NATB certifies assessors and competence centres.</p> <p>Assessment centre make use of PDCA circle with assessment criteria: Resources, material, human, competence assessors, adequate instruments, assessment process, transparent material, complaints procedure, chances' equity, registration system for assessment results.</p> <p>Process based approach analysis has started in Romania.</p> <p>Systemic approach proposed by Ion Hohan.</p>
Quality approach	Yearly measurement of the elements of the PDCA circle using various measurable criteria. Clear general and particular objectives. Certified assessors. A new occupational standard for the tutor's occupation is in process to be approved. Quality management systems.
GP criteria mentioned	<p>'There is not enough culture for NONFORMAL CVT.</p> <p>The TUTORS for WBL are not official actors. Now a new OCCUPATIONAL</p>

	STANDARD for the TUTOR occupation is in process to be developed. The authorization process is quite long because there are few certified external assessors.’
Obstacles	
	Fiatest Case 2 Formal
Context of example	Romanian VET system has 3 subsystems each having a specific legislation: apprenticeship by ministry of labour, IVET by ministry of education and CVT by national adult training board (NATB). NATB has tripartite structure (state, employers, unions)
Description of example	Formal CVT with 2 options: Qualification training programme (360 to 1080 hours depending on level) or improvement/specializing training including 2/3 wbl component (40h to 1 month)
Purpose	’Formal CVT is focused on people who need to accumulate knowledge and skills in a clear training environment, with TRAINERS, curriculum (authorized training program) and a school/training centre.’ Wbl component envisages to improve working life skills.
Stakeholders	Students, trainers, tutors for practical activities, CVT providers, companies. Most participants of qualification training programmes stem from general secondary education. Those of improvement programmes have university or polytechnic degrees. Usually companies pay a great share of costs for training.
Process element	Training programs include 1/3 theoretical and 2/3 practical elements. Wbl elements are developed by CVT providers, employers and possibly subcontracted companies having special equipment. CVT provider concludes contract with company to offer training. Wbl is performed during daily work followed by evening classes in the case of 160h to 1080h training. Wbl is performed between end of theoretical training and examination in the case of improvement training programs. CVT provider has total responsibility and offer theoretical input and possibly practical components. Appoints a company tutor specialized for practical training to offer guidance for students within companies. Subcontracted company might be involved. Student receives nationally recognized certificate. End of 2007: 4929 qualification training programs, 2353 improvement and specialising training programs
Outcome	’There are three types of assessment: initial, during the CVT process, final examination. The assessing instruments are authorized in the same time with the authorization of the CVT curricula. The CVT providers are using many assessment instruments which are applied to assess all competences’ components, according to the EQF criteria: knowledge, skills and personal competences.’ Assessment of knowledge, skills and personal competences by a mixed examination team (county authorization commission, CVT provider). Practical demonstration can be included.
Learning Assessment	The actors involved in designing the curriculum are the training providers asking for official authorization. To be authorized, they have to develop a training program (Training Providers) in relation to an official occupation linked to the COR-Romanian Occupation Classification and covered by an Occupational Standard. Sometimes the employers are involved in this process. Plans: Operations plan of CVT provider. CVT provider's training plan with objectives, targets, resources and assessment criteria. CVT provider’s training program assessment instruments.
Information concerning planning phase	NATB authorizes trainers from 2010 onwards. Many CVT providers have quality management systems (ISO 9001/IWA 2 standard). Process based approach analysis has started in Romania. Systemic approach proposed by Ion Hohan. Students and sometimes employers evaluate CVT programmes.
Quality approach	Involvement of employers given that labour code obliges them to training. CVT programmes combine wbl with online study. Certified trainers starting from 2010. Quality management systems.

GP criteria mentioned	Romania has a very difficult problem: due to the long length (1080 hours) of the CVT for technicians/masters there is a lack of such specialists, because they do not have time to follow such training programs. 'Tutors for WBL are not official actors. Now a new OCCUPATIONAL STANDARD for the TUTOR occupation is in process to be developed.'
Obstacles	

	PVI Case 1 student
Context of example	<p>'PVI is a regional VET provider with 12 units in south-western Finland. It is a part of Pirkanmaa Educational Consortium, which was founded in 2007. PVI provides education for 25 vocational qualifications.'</p> <p>The vocational upper secondary education and training in Finland is based on the National Core Curricula. Every VET provider has to draw up locally approved curricula (based on the National Core Curricula), which form the basis for the students' personal study plans.</p> <p>The goals are based on the national core curriculum for the vocational education and training programs, which have been written in the European framework of vocational upper secondary education and training.</p>
Description of example	'WBL is provided in cooperation with several employers based on a General Agreement signed by the parties. WBL is planned, guided and based on the objectives driven of the curriculum. An individual WBL study plan is made for the student before or at the very beginning of the WBL-period, together with a teacher and an instructor. The WBL-plan is a part of the student's individual study plan.'
Purpose	<p>Adapt theory to work life situations, coach student for real life situations, train skills, student will find jobs more easily, students learns tasks, procedures and work life rules, enhance student's readiness to work as practitioner, foster interest in life long learning.</p> <p>Enable work life representatives to shape training. Employers profit from well prepared and examined employees after the wbl period.</p>
Stakeholders	Pirkanmaa Vocational Institute, about 700 companies including work place instructors, students. PVI is part of Pirkanmaa Educational Consortium uniting 5 VET providers.
Process element	<p>Compulsory structured upper secondary vocational programme lasting 3 years (unpaid). Dependent on individual study plan wbl component lasts 20 to 70 weeks out of 120 weeks. Principal orders a teacher to counsel wbl. Teacher prepares himself for counselling. Student looks for workplace (with help of a teacher).Teacher checks suitability of workplace. Parties involved sign a general agreement. Teacher makes a report for the regional work safety organization. Preparation time. Teacher coaches company tutor and student.</p> <p>Teacher makes necessary arrangements for wbl period. A wbl study plan (on the job learning contract) is prepared and signed. Individual study plan includes learning objectives, tasks at workplace, assessment plan and skills demonstration as well as coaching.</p> <p>Employer gives orientation to student and student orientates himself to workplace. Student learns by doing and asking questions. Employer gives guidance, feedback and controls. Teacher guides and gives support to both. Assessment involving all stakeholders. Teacher makes a decision about grade. Evaluation and development of wbl process.</p> <p>More than 60% have better grades compared to usual learning outcomes, most students get a summer job offered by their placement, 60% get a job afterwards, 15% go to military, 7% continue studying.</p> <p>Even if the client-satisfaction-indicators are just in the stage of initialization, it can already be stated that most of the students are very satisfied with their WBL periods.</p>
Outcome	'The assessment of learning process and results takes place weekly during the WBL period, as well as before and after skills demonstrations (student's readiness for a skills demonstration / student's success in a skills demonstration) or at the end of WBL period (if there is no skills demonstration). The method of assessment is a discussion between all three stakeholders (a student, a teacher and a workplace instructor). Eventually the

	student receives a grade, a pass or failed, for the completed WBL period.’
Learning Assessment	Clearly defined procedure to be followed: Head of division orders teacher to counsel wbl, teacher prepares himself, etc. (see process elements)
Information concerning planning phase	<p>’The described systematic WBL procedure with a feedback and repairing system is part of the quality assurance system in Pirkanmaa Educational Consortium. It ensures that each stakeholder will be taken into account when planning the on-the-job-learning periods.’</p> <p>’The process quality will be ensured by following the description, directives and forms (websites linked to the descriptions). The process description will be evaluated every year by using inquiries, analysing data base, constituting trends and making plans for repairing the process. The process owner is responsible for this quality assurance process.’</p> <p>Wbl aims are evaluated using learning assessment methods and client satisfaction indicators. Wbl is also evaluated by national agencies.</p>
Quality approach	Systematic wbl process, quality system in place, analyses and assessments are carried out, student focus, stakeholder involvement, client satisfaction, students get jobs.
GP criteria mentioned	
Obstacles	

	PVI Case 2 network
Context of example	<p>’PVI is a regional VET provider with 12 units in south-western Finland. It is a part of Pirkanmaa Educational Consortium, which was founded in 2007. PVI provides education for 25 vocational qualifications.’</p> <p>The vocational upper secondary education and training in Finland is based on the National Core Curricula. Every VET provider has to draw up locally approved curricula (based on the National Core Curricula), which form the basis for the students’ personal study plans. In PVI the locally approved curricula, WBL and skills demonstrations are planned in an intense cooperation with the regional labour market and representatives of working life, as well as other VET providers in Pirkanmaa Province. Many projects are started for this purpose in Pirkanmaa.’</p> <p>’PVI is currently developing a process called Quality Assurance System. As a part of this process have been defined and implemented the work-based learning (WBL) process and directives. The definitions and directives are meant to be utilized in the introduction and coaching of teachers, students and instructors at the workplace.’</p>
Description of example	Creating common tools, procedures and forms (wbl portals and shared projects) with other VET providers and working life representatives in Pirkanmaa Province.
Purpose	<p>Develop regional cooperation in wbl learning and skills demonstration.</p> <p>’The purposes of the recent project going on in Pirkanmaa Province are to create common tools, procedures, forms and WBL-portals (for instance http://marata.topirkka.fi), to develop occupational safety, to provide courses for workplace instructors and teachers, to develop and test different models to train the instructors and to develop WBL for those students who need special support for their learning.’</p>
Stakeholders	Working life representatives, VET providers, regional occupational safety agency.
Process element	<p>Survey candidates for planning the project, make project plan, application for funding.</p> <p>Kick off and implementation of project, evaluate and report results, plan for further cooperation and dissemination.</p> <p>’A new innovation needs an initiator who has an idea required by each stakeholder. The role of an initiator is to arrange a meeting surround an idea and to act as an activator in the first beginning. As an initiator could act for instance a teacher who has noticed a certain problem, which needs cooperation with other stakeholders to be solved. If a VET provider organisation is flexible and opened enough, it will offer a good “substrate” and support for changing an idea to a project plan. In Finland there are many project funding resources with criteria for cooperation with other VET providers and work life representatives.’</p> <p>In 2009 the number of projects has increased from 1 to 4. Projects last for more than a</p>

	<p>year.</p> <p>Dissemination is very important - two projects had been implemented after disseminating the good results of other projects.</p> <p>Pragmatic view: Partnership will continue as long as cooperation continues and produces results. Needs of stakeholders need to be fulfilled.</p>
Outcome	Meetings and reports are used to assess progress.
Learning Assessment	A procedure for developing regional cooperation is in place: Survey candidates for planning the project, make project plan, application for funding, evaluate and report the results, make a plan for further cooperation and dissemination.
Information concerning planning phase	Quality of projects will be evaluated in project meetings and recorded in project minutes and reports.
Quality approach	Number of projects as indicator, integration of labour market representatives, benchmark setting, wbl portals. It is very important to have a motivator, an initiator and leader for the cooperation.
GP criteria mentioned	
Obstacles	

MBO Case 1 vocational	
Context of example	<p>'With the implementation of the WEB, the new act on Vocational Education and Training, in 1996 the two learning pathways in VET (work-based or school based) were put in the same qualification framework. This means that the same qualification can be achieved through different learning pathways.'</p> <p>'Apprenticeship or work-based learning has been more or less rediscovered in the late nineties, but with new learning and working arrangements and with new connections between school and work-based learning. It has become part of an elaborated system of vocational education, which includes the two already mentioned main pathways with different combinations of school and workplace learning.'</p>
Description of example	<p>'About 35% of the VET students attend wbl pathway. They have the status of an apprentice and they are paid for their work according to the agreements made by the social partners. Generally, they combine four days working in the week with one day College. There are however some different models according to the branch.' 18 branch based expertise centres and the VET-Colleges are together responsible for the VET. 'The expertise centres are in charge of the requirements (the 'what') and the Colleges of the programs (the 'how').'</p> <p>Institutional autonomy of VET colleges allows them to follow innovative learning pathways. Two wbl projects at institutional level are given for illustration. Learning targets are formulated in cooperation of company, school and student.</p>
Purpose	<p>Vocational education should expand to include effective problem solving on the job and work process knowledge. It is compulsory and always an integrated part of the VET-program. Improvement of vocational national skills standards. Provision of a greater adaptability of workers to a continuously changing labor market.</p> <p>Wbl projects: One targets to reduce early school leaving and the other project wants to integrate socially excluded groups by making use of tailor made learning pathways.</p>
Stakeholders	<p>320,000 school based and 180,000 work-based VET students, 70 VET institutions (40 ROCs, 12 AOCs, 18 Vakscholen), around 185,000 accredited learning companies, 17 centres of expertise covering all branches accredited learning companies.</p> <p>Wbl project 1: 240 students, social work, career advisor, youth welfare care, municipal health service, school attendance officer. Wbl project 2: Companies, branch organisations, youth help, representatives of target groups, mental health support services, secondary schools and VET, social services of municipality</p>
Process element	Programme is compulsory and apprentice gets paid while students of school based pathway with less work engagement do not get paid. Usually four days of work and 1 day at college per week. Constant communication between company, tutor and student

	<p>beginning with the expected learning outcomes which are formulated and recorded in a work placement assignment document. Work supervisor is responsible for guidance on the job and approval of learning outcomes.</p> <p>Involvement of student into day to day operations of company with a focus on expected learning outcomes. VET tutor maintains regular contact with work supervisor. Progress reports and general assessment at the end involving stakeholders. Student drafts final report.</p> <p>Wbl project 1 features: Special educational methods, individual education plans, only 10 hours study program, 3 days work placement, individual personal & career guidance, special needs system, immediate reaction on behaviour, cooperation with elementary vocational training, circuit education, language in books reduced & replaced by photo.</p> <p>Wbl project 2 features: tailor made routings with career focus, matching of apprenticeships, guidance and coaching, development of competence profiles, structured monitoring system, total approach of groups at risk, create practical learning environment, sector career approach, continuous quality improvement traject.</p> <p>System of school based and work-based learning are growing together. Shift from getting an impression of how a company works towards well supervised learning targets. New forms of combination between wbl and school based learning are emerging since the new act in 1996.</p>
Outcome	<p>Student: Learning targets are formulated by student, college and company. Learning outcomes are formulated as competences which have to be agreed upon. Consequently, progress reports are established which are compared to initial project plan. Conversation visits take place. Final assessment by triangle and the student is expected to draft a final report.</p>
Learning Assessment	<p>Different ways of describing the planning process varying from school to school dependent on philosophy and possibilities. Main stadia are described within a contract. Schools make yearly planning.</p>
Information concerning planning phase	<p>Student organization JOB conducts research on student opinion on the quality assurance of wbl. Government by the way of inspection does research at VET colleges, but not at companies which is the task of centres of expertise. Quality (qualification structure, job competence profile, updates) is also guaranteed by centres of expertise having on board representatives of employers, employees and the state. They accredit further wbl companies.</p>
Quality approach	<p>Learning contract, focus on outcomes, integration of company needs, close cooperation between stakeholders, increasing use of ICT, constant evaluations, reflection, measurability, innovative learning beyond status of pilot projects, tailor made approaches, structured reporting and guidance.</p>
GP criteria mentioned	<p>Possible disagreement between the expertise centres and the colleges in the area, where the 'what' stops and the 'how' starts. Permanent discussion point is the relation between a nation wide recognized qualification system vs. institutional autonomy, resulting in very different learning pathways. Availability of the WBL-places depends heavily on the economic situation. Employers organisations raised the issue of becoming better compensated for guidance work. There is also some concern on the side the Ministry and the Employers organisations about the way the examinations are organised hitherto. Examinations is a task of the VET-colleges, but the Ministry is trying to get get more influence on that in order to be sure about the quality standards.</p>
Obstacles	

3s Case 1 student	
Context of example	<p>Universities of applied sciences (Fachhochschulen) have to accredit regularly their bachelor and master programmes at tertiary level. Technikum Wien is one of the largest universities of applied sciences in Austria.. Professional internships are an important wbl component within structured degree programs.</p>
Description of example	<p>Professional internships lasting 12 to 15 weeks should bridge the gap between theory and practice facilitating a better labour market integration.</p>
Purpose	<p>Create a link between theory and practice.</p>



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Lifelong Learning Programme



WBL-TOI MANUAL

	<p>Facilitate labour market integration.</p> <p>Technikum Vienna aims to offer sufficient placements to its students and it wants to fulfill expectations of stakeholder as agreed in the course of an initial project plan.</p> <p>Practical knowledge can be incorporated into university courses.</p>
Stakeholders	<p>Students, companies, university. To some extent also the FH council being responsible for the accreditation of degree programs.</p>
Process element	<p>Students, possibly with the help of the university of applied sciences, search for job placements. The student has also to find an academic tutor accompanying the placement. Tutor and student draw up a project plan including tasks to be fulfilled at the workplace.</p> <p>Project plan includes a definition of learning outcomes. An educational contract is signed by the company and the student. Agreements reached between stakeholders are culminating in deadlines which are signed by the respective persons. The educational tutor is the process owner guiding the student.</p> <p>Assessment through regular reports and a final assessment carried out by the company and academic tutor. Presentation of result to colleagues. Feedback forms from students and company are forwarded to tutor to decide upon future measures. Internship gets accredited as part of structured degree program.</p> <p>Tenor of internship place distribution, knowledge augmentation for teaching staff, company feedback, internship semester report, student feedback.</p> <p>50% of students completing a professional internship do get employed at the respective companies. The number of students at Technikum Wien has increased from 300 in 1997 to 1500 in 2007. In addition, a growing number of placements can be identified.</p>
Outcome	<p>Technikum Wien provides for a project plan which has to be followed in the course of the internship. This includes in particular a definition of learning outcomes, namely to learn applied techniques, acquire practical experience and solve real-life problems.</p> <p>Regular progress reports.</p> <p>Conversation between the respective tutors from the educational provider and the company as well as the student should guarantee timely assessment.</p> <p>After the internship the student has to draft another final report and a final assessment of the learning experience takes place.</p> <p>Student receives a grade, a pass or failed, for the completed internship.</p>
Learning Assessment	<p>Clearly defined procedure to be followed: Acquisition of internship places, application, choice of supervisor at Technikum Wien, approval of internship, start of the internship semester, definition of tasks, continuous assessment of project progress, completion of professional internship, evaluation of professional internship, presentation of internship semester.</p> <p>Core feature of the planning procedure: A project plan is set up involving the stakeholder.</p>
Information concerning planning phase	<p>Technik Wien has a quality management system including strategy, goals, standardised processes, responsibilities and communication of performance. Internships were included into this system. Originally student feedback was used and only reaccreditation provided opportunities for change.</p> <p>Assessment of professional internship at an institutional level: Graduate surveys every two years. Counting the number of graduates receiving a job at the companies where they undertook placements. Evaluating the number of placements.</p> <p>Satisfaction of companies with level of education.</p>
Quality approach	<p>Stakeholder approach, clearly stated objectives, predefined assessment procedures, EQF model taken into consideration, number of students and placements have increased.</p>
GP criteria mentioned	<p>Internships are often not well remunerated. Quality of internships is not always guaranteed. Students have to play a very active role which might be a burden for some students.</p>
Obstacles	

Case 2 Austria vocational school TFBS/EKE	
Context of example	<p>'The frame of learning is the curriculum. Experts of the various vocational schools (usually the headmaster and teachers) set up the so-called 'Landeslehrplan', a curriculum for provinces.' Because of different conditions in the provinces every province got the autonomy from the state to develop their own 'Landeslehrplan'. Eventually a school plan is adopted approved by the 'Landesschulinspektor', the link between schools and provincial government.</p> <p>Students participate within a dual system which means that phases of work at companies and classroom teaching as well as work-based learning in school do rotate.</p>
Description of example	<p>Vocational school TFBS EKE carries out a job analysis every 5 years. This survey is the basis for the interpretation of the 'Landeslehrplan' leading eventually to a practice oriented school curriculum. The job analysis allows to integrate work-based knowledge into the curriculum.</p> <p>Another example are projects carried out within the school, like "measuring the temperature at a rectification construction"</p>
Purpose	<p>School wants to incorporate business knowledge within its curricula.</p> <p>Actual needs of the labour market (like project management skills) can be taught by making use of projects enriching everyday school life.</p>
Stakeholders	<p>VET school, 1300 students per year, companies, Landeschulinspektor AMS (labour market service), Federal Economic Chamber, Chamber of Labour</p>
Process element	<p>Apprenticeship lasts 3,5 to 4 years (paid). Each year students are 9 months within companies and for 9 weeks they attend vocational school to learn theories and practical skills.</p> <p>Every 5 years a job analysis is carried out using a questionnaire about company needs being incorporated into curricula. First, students record the most important activities. The headmaster creates questionnaires for companies based on these results (including open questions). Questionnaire is sent to companies and they return it back to the school. Headmaster carries out an SPSS analysis and results are used for the following school curriculum.</p> <p>Concerning wbl projects at school: 1st year students obtain general knowledge within school, 2nd year students' get tasks with more self-responsability, afterwards project work prevails. Projects in school as reaction to different challenges in WBL and working life</p> <p>Job survey guarantees practically relevant curricula. E.g.: Innovative project for measuring the temperature at a rectification construction. Better labour market integration. Functioning partnership between school and companies.</p>
Outcome	<p>Final exams and the certification of electricians carried out by an enterprise for automation engineering are used for measuring the success of wbl activities.</p>
Learning Assessment	<p>So-called future forums ('Zukunftsforen') consisting of teachers carry out planning activities. They adapt the school agenda to technical and other innovations. These forums can be seen as the link between the school and the company world. Moreover, a constant exchange of information between all stakeholders involved enables innovation.</p> <p>'The skills and theoretical knowledge students have to obtain in the company per year is regulated in the so-called "Berufsbild", a kind of job description. The description of the knowledge and skills they have to learn or improve at school can be found in the curriculum.'</p>
Information concerning planning phase	<p>Discussions within Zukunftsforen guarantee modification, advancement and quality assurance.</p> <p>Recently a peer review project for schools was joined in collaboration with an Austrian quality assurance organization.</p> <p>Constant involvement of stakeholders.</p>
Quality approach	<p>Job analysis, meetings with social partners, good collaboration with social partners and companies</p>
GP criteria mentioned	<p>One of the biggest obstacles are different opinions about the importance of the topics which are contained in the curriculum. These different points of view result from different</p>

	<p>structures of the companies in the different provinces. But these obstacles can be minimized by means of the curriculum for a single province. Possible insufficiency can be corrected quickly.</p> <p>The second problem is the adjustment of the “Berufsbild”, which is the job description of the Austrian Federal Economic chamber, and the curriculum. Which emphases are set in the job description, which emphases are set in the curriculum? Therefore a continuous discussion among all participants is necessary.</p>
Obstacles	

2.) Transferring key elements of innovative practice of work-based learning: Answers by the partners

The partners were asked to provide information on the most important elements of their cases studies and to define the most important elements for a transfer. However, the elements are not necessarily related to the planning phase given the different focus of the case studies on planning, description of innovative stakeholder practice and quality assurance. The answers to this question vary as well from case to case. In the following, the answers received to these questions are cited to facilitate a discussion based on which a refinement of key elements for transfer can be made.²⁶

a.) Mastertrad

Could you identify in short the most important process elements of your example?

‘The Master’s Degree project has, for the first time, included the **employment** (before the start of the Master’s Degree lectures), of those selected, by the Piedmontese companies that participate in the initiative with Apprenticeship contracts for courses of Advanced Training (ex art. 50 Lgs. 276/2003 – Biagi Reform), as well as a **training course** at the Turin Polytechnic, Skillab and partner companies, designed by the Polytechnic in synergy with the companies; at the end of which (the course lasts two years) the **Master’s Degree** will be conferred.

An important element in the learning project has been the bilaterality, the strong connection between the entrepreneurial world on the one hand and the trade unions on the other that has constituted the innovative nature of the initiative, the first project designed for apprentices.’

Which elements of your example do you think could be transferred to another country?

‘All of them.’

b.) Fiatet Non-formal

Could you identify in short the most important process elements of your example?

‘For NONFORMAL CVT validated by using an assessment performed by an AUTHORIZED ASSESSMENT CENTRE the most relevant processes are:

a. for the candidate

²⁶ We did not receive a response to these questions from all partners.

- Studying the Occupational Standard, supported- if it is necessary- by a TUTOR (appointed by the employer, eventually in consultation with the assessment centre) or/and by participating (partially) – to a FORMAL Training Program.
- A new OCCUPATIONAL STANDARD for the TUTOR’s occupation is in process to be approved.
- a self assessment according to the requirements of the Occupational Standard.
- participation to an official assessment-for all competence units or only for some competence units.
- in the case of the non validation of the required competences, the process goes on for obtaining the necessary knowledge/skills.

b. for the Assessment Centre

- development of the assessment instruments for the specific occupation
- authorization of the assessment centre based on a PDCA cycle applied to 8 criteria.
- receiving the assessment’s application from the candidates.
- discussing the assessment instruments with the candidate.
- applying the assessment instruments.
- taking the “competent/not yet competent” decision, for all/some competence units.
- continuing the cooperation with the candidate in the case when the decision was “NOT YET COMPETENT”

Which elements of your example do you think could be transferred to another country?

- The experience of the WBL results’ validation by using the Authorized Competences Assessment Centres.
- The application of the PDCA cycle to the Authorized Competencies Assessment Centres.’

c.) MBO Case 1 vocational

Could you identify in short the most important process elements of your example?

‘In the Netherlands the 18 branch based expertise centres and the VET-Colleges are together responsible for the VET. The expertise centres are in charge of the requirements (the ‘what’) and the Colleges of the programs (the ‘how’).

The already mentioned branch based commissions (employers and education) deliver advices about the qualification files to the branch based expertise centres.

They, on their turn, give advice to the Ministry, who then concludes the qualification file. This is all about the official requirements. The implementation of this is a matter of regional agreements between the VET-Colleges and the companies and it is the college who decides where the learning takes place. This is part of the institutional autonomy, although it needs to meet the required national quality standards. One of these quality standards is, that WBL can only take place in recognized learning companies. Accreditation of these companies is the legal task of the branch based expertise centres.’

Which elements of your example do you think could be transferred to another country?

‘The system of the two learning pathways, leading to the same qualifications ensure the possibility to deliver enough training places and to avoid the exclusion of certain groups. Moreover, the institutional autonomy to provide tailor made learning pathways within the national qualification structure makes it possible to create WBL solutions for groups at risk, that are threatened with

exclusion. In this way, certain innovative learning approaches get further than the status of a pilot, as they can be awarded with an official diploma. The flexibility concerning the curricula also leads to institutional agreements, offering students the possibility to follow a program from the pre-vocational level through the vocational level and ending up at the polytechnic level. These uninterrupted learning pathways prevent early school leaving and are highly time-efficient.’

d.) 3s Case 1 student

Could you identify in short the most important process elements of your example?

The most important element is the project plan with a definition with learning tasks to be fulfilled. The respective stakeholders agree on the learning outcomes and set up a contractual agreement to define the roles of each of them. A clear planning procedure needs to be created to allow for an adequate monitoring and assessment of the good practice. A process description defines steps to be taken: Acquisition of internship places, application, choice of tutor, approval of internship, start of internship and definition of tasks, continuous assessment of project progress, completion of internship, evaluation and finally presentation. The process plan needs to state the tasks to be taken, the persons involved, the tools (guidelines, list, report, instruction, etc.) and the expected results.

Which elements of your example do you think could be transferred to another country?

The context of an example needs certainly to be taken into consideration. Often it is the context which determines whether a practice succeeds or fails. For instance, the Austrian example of professional internship by using contractual agreements and a project plan to determine responsibilities can only be viewed as an innovative example taking into consideration the dynamic development of the sector of universities of applied sciences and their well established network with high performance companies. The success of this practice depends ultimately on the employability of former students.

Despite the importance of a specific context, it is realistic to try to adopt the above mentioned planning procedure to other countries. Professional internships as part of structured VET programs with a selected network of companies are a good possibility to enrich the school based system. While a mutual suspicion between higher education institutions and companies makes cooperation often difficult, a clear definition of tasks, stakeholders, tools and expected results might help to bridge the gap. The support of VET institutions for students, however, is crucial to develop such relationships.

e.) 3s Case 2/vocational school EKE

Could you identify in short the most important process elements of your example?

‘It is important that a constant communication among teachers themselves (members of the “Zukunftsforen”) and among teachers and representatives of the companies takes place. This communication enables that technical innovations can be adapted quickly.’

Which elements of your example do you think could be transferred to another country?

‘Developing questionnaires for students, evaluating the results of the interview and developing questionnaires for companies based on the results of the evaluation is a transferable and efficient method.’

Another possibility could be that existing questionnaires will be transferred and translated into the particular language of the states. A few aspects have to be obeyed:

The persons who arrange the interviews:

- have to set the standards for the evaluation
- should be positive about the method of interviews.

Personal contacts (meetings) and discussions among the representatives of the various countries would help to make the transfer successful.’

3.) Case studies of good practice delivered by partners

This sub-chapter will include the examples of planning of work-based learning provided by the project partners. To allow for a short description of the respective examples, it might be useful to add some mapping criteria. Such criteria will give a quick overview of important features of educational programs. The following criteria will be suggested:

System level Yes/No	Institutional level Yes/No
“Learning/didactics” Yes/No	Assessment/Testing Yes/No
Diploma Yes/No	Non-Diploma Yes/No
Initial education Yes/No	Further Education Yes/No
Contractual Yes/No	Non-Contractual Yes/No

The goal is not to introduce another layer of analysis, but to offer a purely descriptive device to illustrate some features of examples of work-based learning.

a.) Skillab Case 1 Mastertrad

System level No	Institutional level Yes
“Learning/didactics” Yes	Assessment/Testing Yes
Diploma Yes	Non-Diploma No
Initial education Yes	Further Education No
Contractual Yes	Non-Contractual No

PART B. Descriptive structure of good practice in apprenticeship work.

1) Short description/summary of example (max. ½ page)

Skillab, managerial training company for the Piedmontese entrepreneurial system, and the Turin Polytechnic have been collaborating for years on different initiatives and projects, with the main aim of observing and satisfying the ever innovative professional needs and know-how that emerge from the industrial fabric of the territory.

The 1st **MASTER'S DEGREE IN PROJECT TECHNIQUES AND METHODS, AND THE SETTING UP OF PRODUCTION SYSTEMS** came into being in December 2005.

The project realized by SKILLAB and the Turin Polytechnic, financed by the Piedmont Region in the context of the “*Announcement of competition for the experimentation of apprenticeship training courses*”, and co-financed by the European Union, represents a new opportunity of immediate employment and specialist training after graduation.

In fact, the initiative foresees:

- **The employment** (before the start of the Master's degree lectures) of the selected graduates who have not reached the age of 30 when they are employed by the Piedmontese companies that participate in the initiative with Apprenticeship contracts for Advanced Training (ex art. 50 Lgs. 276/2003 – Biagi Reform);
- **A training course** at the Turin Polytechnic, Skillab and partner companies lasting two years; after which a **Master's degree** will be awarded.

The proposed training objective, that will lead to the attainment of the 1st class University Master's degree in “Project techniques and methods, and the setting up of production systems”, has the aim of providing both the managerial and technical know-how which is necessary when it comes to optimizing and planning the project phases, as well as commissioning the installations, from the designing of the same to their delivery.

Having obtained their Master's degree, the students have, in particular, acquired the necessary know-how with which to perform well in a well-defined yet very complex reality; one consisting of modern manufacturing means and systems together with project management methodologies, which are necessary for the optimization of the processes of competence (quality, costs, training times).

At the end of the training period, the participants will be confirmed and employed on a permanent contract basis.

- 2) Describe the background and the surroundings/environment of work-based learning in your example.**
 - a) How is work-based learning in your example carried out? (e.g. description of setting, learning methods?)**
 - b) Show structural data of your example (number of students involved, number of learning institutions involved, number of workplaces for work-based learning), development of work-based learning in the last years.**

The companies involved in the project, and that will employ the apprentices, are ones that produce instrumental goods for industrial production.

With a view to pursuing the objectives of the experimentation and, therefore, creating a model of integration between training at training institutions as such and companies, the training course will be an integrated process that will last a total of 1,200 hours; of which, 400 hours at the training institution (Polytechnic and Skillab) and 800 hours at the company.

The working environment is organized with equipment, tutor and an optimum combination of theory and on-the-job training.

a)

The learning method is cognitive: from practical on-the-job experience to theory. It is a specialized "training-on-the-job" in which the apprentice will have to apply the theoretical notions studied during the training course at the University, complete with all the additional aspects typical of a work activity: keeping to timing, teamwork, attention to the industrial aspects (costs, quality, responsibility, etc.). With this object in view the apprentice will become an operative member of the project team, he/she is assigned to, through his/her direct involvement in the operative activity of the company with the assistance of his/her own "company tutor", who will be chosen on the basis of suitable competence and "didactic" aptitude.

The course develops over a period of about 24 months, with the following phases:

1. **Training at the Turin Polytechnic:** it is foreseen that this phase will last 11 months for a total commitment of 16 hours/week (two full-time days) for about 30 weeks. During this period lessons in theory and the relative training, in the Laboratories of the Departments involved in the training process, will be allocated. This activity will be reinforced by practical activity, coherent with the academic training developed at each of the Companies participating in the project with the aim of having a perfect synergy between the two realities.
2. **Training at the Companies:** The second half of the first year and all of the second year will be dedicated to the completion of the in-company training course. During this period the following activities will be undertaken:
 - the placing of the apprentice in a work group for training-on-the-job activity (from the 6th to the 12th month)
 - project work (from the 12th to the 24th month)
3. **Training at Skillab:** will account for 80 hours of training in relational competencies and economics, also in the English language:
 - Communication, Leadership, Teamwork, Problem solving and Decision making
 - Economic and financial management (for students with no specialization)
 - Technical English

The specific modules, kept by Skillab, are oriented towards sustaining the development of the capacities linked to the management of the professional role, which regard the following areas:

- *realized* with special reference to orientation towards results (decision; leadership; organization of programs)
- *relational* with particular orientation towards the customer (Group work; team building teamwork; management and development of resources; communication and public speaking)
- *cognitive* in the context of which the emphasis is on systems elaboration, problem solving and innovation.

At the 1st Master's degree course 10 high level graduates in Engineering participated, all of whom were confirmed and given permanent contracts by the companies where they had done their on-the-job training course.

3) What is the purpose of work-based learning in your example?

Is it part of a structural VET-programme? Is it carried out freely by the “learners”?

Is there any legal / statutory background for work-based learning (and is there any purpose of work-based learning)?

This training initiative tends to meet the urgent needs of a new professional profile. These very needs are strongly requested by the companies in the territory in order to renew specific professional capacities, something necessary for the evolution of technology and the means of production in the market, and also for the compelling turnover needs of staff whose professionalism was developed in the past through long experience in the field.

The professional person thus created will be able to coordinate, on the inside of the company, the activities of different specializations: designers, processing programmers, mechanics, electricians, instrument designers, experts in automation, plant health and safety technicians and quality controllers.

The professional profile objective is that required by an activity oriented towards guaranteeing respect of contractual requisites, by making sure that the machine or production line is designed, installed and tested in accordance with the project specifications, and also in accordance with the needs of the end user.

It is part of the institutional training offer of the Turin Polytechnic and SKILLAB, observatory for the needs expressed by the local industrial system for the training of professional people and the new roles that the manufacturing world requires today.

Apart from the training activity at the Turin Polytechnic, the apprentices will do a training course at the companies that have employed them, as well as at Skillab (Human Resources Evaluation Centre).

This part of the course will allow the acquisition of 20 credits from a total commitment of 800 hours. It will have the following objectives:

- to complete the apprenticeship of the training activity at the training institution with a direct link to company activities;
- to complete the technical training with training modules on transversal subjects.

To participate in the Master's degree course the graduates at the Turin Polytechnic apply by sending their C.V.s online through the personal web page of the Didactic Portal of the Turin Polytechnic.

The graduates of other universities or institutes must send their C.V.s in the European format.

The candidates should have a first class Degree or a specialist Degree in one of the following subjects:

- Mechanical Engineering
- Motor vehicle Engineering
- Aerospace Engineering
- Electrical Engineering
- Materials Engineering

In line with the aims of the Apprenticeship for Advanced Training courses, the proposed training course is based on the strong connection between the academic and company elements.

It will allow the attainment of the 60 credits necessary for the first class Master's degree, in accordance with the following:

To participate in the Master's degree course no registration fee is foreseen.
The registration fees are covered by regional financing.

4) Roles of different stakeholders.

- a) **Who is delivering work-based learning?**
- b) **Characterize the “learners”: Demographic and educational structure, payment and social situation during work-based learning?**
- c) **Learning institutions involved?**
- d) **What about the state / the government and its role in your example of work-based learning?**
- e) **Roles of professional bodies, students? / employees organizations**

ACTIVITY	SKILLAB	POLYTECHNIC	COMPANIES
CO-PROJECT	X	X	X
SELECTION	X	X	X
PROMOTION	X		
ANIMATION	X		
TEACHING	X	X	X
ASSISTANCE	X	X	X
ON-THE-JOB TRAINING	X	X	X
EVALUATION		X	X

Apart from the Piedmontese Region and the European Union, also the Industrial Union, the Polytechnic and Sillabe have been involved in the initiative, along with the following companies: Comau , Famar , Fidia, FMT Group , PrimaIndustrie , Sicmat , Util and Vigel

5) Assessment of learning success in your example of work-based learning? How are learning outcomes assessed in this context?

The activities realized in the companies will be put together in brief reports which will be the subjects of presentations in academic seats, and will allow the assignation of training credits.

Each project work will be jointly supervised by a company tutor and an academic tutor, who will attend to drafting of the written reports.

As regards the training allocated by Skillab, a test is foreseen at the end of each module to determine the learning level upon which the relative training credits will be assigned.

As regards the evaluation and the accreditation of the Master's degree, the organizers trust that the Polytechnic organization will conform to the Attachment 1 (art. 4, paragraph 4) of D. M. (Minister's Decree) 8/5/2001 n. 115 that stipulates that every Degree course must have “*a qualitatively constant evaluation system, both in its organization and didactic results, that corresponds to national and international criteria*”.

Successive acts have introduced elements for gradually carrying into effect this decree. The MIUR-CNVSU Document n. 12/01 of July 2001 “*The carrying into effect of an accreditation system for Italian university courses: first recommendations and proposals*” delineates the modalities of accreditation/evaluation and proposes a guide (said Training Model for Quality Management) to show objectives, processes and results of Degree Courses.

In the last few years there have been some significant evaluation experiences: the CRUI-Campus experience centered on quality evaluation and management, the three-year experiment of self-evaluation carried out on 60% of the Courses at Bologna University, the SINAI pilot project heavily oriented towards the accreditation of Degree Courses in the Engineering faculty and, finally, the launching of the Campus One program whose evaluation model has just been completed.

6) Describe the procedure for the planning process within the quality approach in use.

The three levels of University training (level I Degree, level UII Degree, Master's and doctorate) require differently oriented evaluation models.

The level I (three-year period Degree), which is the entrance level for a great number of students, requires a strong emphasis on the legibility of the formative plan (in terms of basic culture and characterizing, level expected of knowledge and ability, competence areas and foreseen professional collocations, eventual national and international benchmarking) and on the organization. The ABET accreditation, the SINAI, MIUR and CRUI-CAMPUS models, as well as Campus One today, all regard the level I Degree.

At level III (Doctorate and Master's) the evaluation must be based on the capacity to create a learning environment strongly oriented towards research and very dependent on the evaluation of the research by the university Departments.

Therefore: differentiated objectives and criteria of evaluation, but with a common problem: to formulate the final judgement on every Course of Studies by way of a very restricted final group of *key aspects*, chosen in a very clear and recognizable manner with which to arrive at the heart of the quality of the training, which is not only the teaching quality but, rather, the overall quality of a collective enterprise which is in itself articulated in different directions.

- Generally, the key aspects of a formative program are:

- **Needs and objectives:** specify the compatible learning objectives of value:
 - initial preparation of the students
 - requisites of the enterprises concerned
 - foreseen placing in the work market
 - consequent general formative objectives
- **Effectiveness:** make the greater part of the students capable of reaching the objectives:
 - subject contents
 - their allocation in what is taught
 - didactic methodologies
 - verification modalities of the results
 - human resources (teachers and assistant teachers)
 - material resources (laboratories, classrooms, equipment)
- **Effectiveness:** make sure there is the correct investment/results ratio for the students and financiers; make sure there is effective control of :
 - students' progress indicators
 - action to minimize learning obstacles (correct timetables, correct times for individual studies, support and well-being services, orientation and tutor services)
 - overhead costs
 - organizational system

- general orientations of the commission, that can be summed up as follows:
- the single course of doctorate/Master's must annually prepare an "analytical report containing the essential data and information that, in a way that can be verified by eventual external assessors, make evident the relevant aspects for the quality of the Course itself;
- given the variety of the doctorate/Master's courses (different in terms of contents, aims and methodologies) it is necessary to allow each person freedom to express their formative objectives, and base the evaluation on a verification of the reaching of the same;
- the "analytical report" prepared by the doctorate/Master's Course constitutes the "evaluation model" for the external assessors; it must contain the data and information that is strictly indispensable for the reaching of a judgement on the "qualities" of the Course, avoiding any irrelevant information and concentrating on the good progress of the training.

The structure of the "analytical report" is articulated in four "key aspects", each articulated in turn in "elements". The "key aspects" of the "analytical report" should be covered in a descriptive and objective manner, and without comments.

It has, however, been thought opportune to introduce after the four "key aspects" a section for comments where the Course can freely comment on information and data previously given, with the purpose of orienting the external assessor's interpretation and, at the same time, making his work easier. In the same "section for comments" the Course can introduce further information that it considers useful in arriving at a comprehensive judgement.

- 7) **What makes the described example to good practice?**
(Please refer to effectiveness, sustainability, innovativeness and measurability also as possible criteria for examples of good practice.)
- a) **Involvement of employers? How are the involved? Are there any stated objectives for work-based learning defined together with learning institutions / "learners"?**
 - b) **Were any evaluation analyses carried out to find out how the objectives of WBL are reached in your example? Are the policy goals / objectives clear and measurable? What are the results of these evaluation analyses?**
 - c) **Are there any innovative practices of quality assurance to be found in the described example?**
 - d) **Ensuring process quality: how is it ensured that the planning of the good practice of WBL will be well implemented, evaluated and after feedback improved?**

The Master's degree proposed here represents, for the territory, the first example of a professional course constructed ad hoc for companies and co-designed by the University, from the formative system connected to the employers' association and the companies.

For many years the system of enterprises has dialogued with the university system but, in this specific case, they have also promoted a work contract typology, that is to say, the Advanced Apprenticeship, which is not a very attractive idea for the newly qualified Engineers in as much as they must accept a lower entrance salary with respect to that of the market.

The definition "good practice" that we have adopted is the one set by ISFOL at the end of the 90s, on the basis of which it is considered that a formative procedure is good practice when: It is effective with respect to the problems it intends to face (Strategic Quality).

It is put into practice effectively (under the managerial profile), efficient, in a way that conforms to set standards (Carried out Quality)

It is reproducible in other territories or organizations (Reproducibility)

It is transferable to similar or diverse application fields (Transferability).

In fact, Such criteria sustain the specific course of our training project for the Master's degree, that aims at selecting a nucleus of excellent formative experience animated by efficient project strategies, capable of favouring the objectives of: occupation, professionalism, creation of partnerships, networks and professional systems.

Further criteria that guide the selection of Good Practices are: the level of innovation of experiences, their capacity to be reproduced for similar problematical situations, their capacity for being used as a model for diverse problems from those for which they were conceived.

The Master's degree realized with the Turin Polytechnic and Skillab represents, in fact, many innovative factors, such as didactic themes or the creation of a new professional person or as a modality of co-project work between University, enterprises and training centers.

The model of analysis and construction of the university course is surely repeatable and, in fact, it is; both for other subjects and for different territories/enterprises.

The initiative can be considered a good practice in as much as it, on the one hand, responds to the real needs of professionalism as expressed by the industrial system; on the other hand, through a virtuous circle of training in the classroom, on-the-job, in activities and operative responsibility it accompanies young graduates into the working world.

The model the initiative experimented with can surely satisfy the requests of professionalism and innovation that industry, in its different sectors, calls for.

b.) Skillab Case 2 Tutortrad

System level No	Institutional level Yes
"Learning/didactics" Yes	Assessment/Testing Yes
Diploma Yes	Non-Diploma No
Initial education Yes	Further Education No
Contractual Yes	Non-Contractual No

PART B. Descriptive structure of good practice in apprenticeship work

1) Short description/summary of example (max. ½ page)

The @PPRENDO project is financed by the general Management for the policies related to orientation and training of the **Ministry of Labour and Social Security**, that promotes the collaboration with the National Commission for the Continuous Training and Apprenticeship of the engineering industry and the installation of facilities, one of which is SKILLAB, with the aim of enhancing the quality of the training process **of professional apprenticeships**.

The project aims to facilitate the work of companies and training bodies, and give the apprentices a uniform level of training with good and secure standards of quality. @PPRENDO was realized by the Milan Polytechnic, in particular by: CENTRO METID (Innovative Methodologies Center for Didactics) MIP MILAN POLYTECHNIC (Business School of the Milan Polytechnic), SKILLAB, training center of the Piedmontese entrepreneurial system.

@PPRENDO addresses all the companies in the engineering and plant engineering sector that have training capacity, that is to say, they are capable of managing training themselves. The objective is to supply such enterprises with all the instruments necessary for them to be able to autonomously manage the training activities with regard to transversal themes.

@PPRENDO proposes the realization of a **system of didactic courses** for the **transversal training of professional apprenticeships** that, though guaranteeing homogeneity in the treatment of the contents, are differentiated according to the characteristics of the user and the company training contexts.

The courses, differentiated according to the characteristics of the user and training contexts, are constituted by **multimedial supports** and are divided into four themes: organization and economics; work relationship discipline; on-the-job safety; relational competencies.

The particularity of the sector and the prevalence of small enterprises makes it necessary to have the characteristics of easy availability, flexibility and adaptability of the training in diverse contexts. Access to all the multimedial materials (lessons, in-depth studies, quizzes, practice) useful for such a training course comes through an e-learning platform.

- 2) **Describe the background and the surroundings/environment of work-based learning in your example.**
 - a) **How is work-based learning in your example carried out? (e.g. description of setting, learning methods?)**
 - b) **Show structural data of your example (number of students involved, number of learning institutions involved, number of workplaces for work-based learning), development of work-based learning in the last years**

@PPRENDO started out with the purpose of **carrying into effect the national collective labour Agreement for the discipline of professional apprenticeships** in the engineering industry and in the installation of facilities subscribed to by Federmeccanica, Assistal, Fim, Fiom and Uilm.

In fact, the stipulating parts, in setting out all the training aspects, have identified the thematic areas of training, the hours to dedicate to formal training, the characteristics of the companies with training capacity, and have also committed themselves to elaborating training modules, modalities and instruments of allocation (with reference to transversal training), with the main objective of making the qualitative level of the institute homogeneous.

@PPREND0, therefore, deals with **training in transversal themes foreseen by the collective labour agreement** for professional apprenticeships.

In particular, one concentrates on the following areas of contents: relational competencies, organization and economics, work relationship discipline and on-the-job safety. The hours to dedicate to the training on the transversal contents are equal to 60, which are added to the foreseen hours for the professional training.

Moreover, in the project is foreseen the training of the company Tutor, that also concerns the use of informatics supports and instruments dedicated to the training of the apprentices.

a)

Access to the @pprendo platform is made by connection to the web address <http://apprendonline.metid.polimi.it/>.

The standard menu (visible to all user profiles) of the platform, in the upper part of the screen, consists of five items.

- **Home**: returns to the main page;
- **Progetto @pprendo (@pprendo project)**: illustrates the project, the bodies involved, the receivers and the particularities of the platform, further giving the the opinions expressed by some companies already using the platform;
- **Presentazione dei corsi (Presentation of courses)**: contains two video demos (films) of the project and platform, as well as a synopsis of the contents and training courses offered;
- **Manuali d'uso (User manual)**: allows the downloading of platform manuals (in pdf format) and the visualizing of the requisites of the system;
- **FAQ**: collects the responses to the most frequent questions asked.
The link **Come iscriversi (How to register)** will open a window of instructions that describes the diverse user profiles and the registration modalities.
Eventual news and communications of the Help Staff service are always published in homepage.

The steps to follow to carry out registration depend on the type of user profile one belongs to. There are four possible profiles:

- **Coordinator Tutor (or Head of Human Resources of a company)**: manages the registrations of the Tutors and Course Students of his Company; if required, will also place the Tutor side by side in the definition and in the monitoring of the training course if the Course students. Such a profile is useful for the company with more than one Tutor; each of whom, following the work of his own group of Course students.
- **Company Tutor (or Head of Human Resources of a company)**: manages the registrations of his own Course students, establishes and follows their training course.

- **Company Course Student** (or employee): differs from the simple Host in that his training course and, therefore, his overall commitment is decided with the Company he belongs to. Consequently, the Course student on the inside of the platform is part of a precise group, linked to the Company and managed by his Tutor.
- **Host:** decides autonomously what course to follow and, therefore, what training course to join.

To have access to the training platform, the company concerned must open its account as **Company Tutor**.

When the registration is completed (and, therefore, his account is active), an e-mail will inform him of the registration: at this point, the company will have free access to the platform and can register His apprentices.

To visualize the material present on the inside of the platform it is necessary to carry out the Login, which enables the vision of the list of courses; the Company Tutors are automatically registered on all the proposed courses.

To the didactic courses are added the Tutor Area and the Course Student Area, two extra sections inside of which one can:

- visit the company Tutor Forum and the general Forum;
- have access to user Manuals (manual in pdf and Videomanuals);
- download the list of contents.

The company Tutor registers his apprentices on the courses, in accordance with a training project delineated by the company and by the young students, but only the Tutor can delineate the training course to follow.

Diversely, the course students are denied permission to modify their course.

3) **What is the purpose of work-based learning in your example?**

**Is it part of a structural VET-programme? Is it carried out freely by the “learners”?
Is there any legal / statutory background for work-based learning (and is there any purpose of work-based learning)?**

The @pprendo project **presents four innovative characteristics:**

- An important **system action**. It is, in fact, not only an agreed upon project but one that carries into effect a part of the collective labour agreement for the apprenticeship discipline in the engineering industry and in the installation of facilities, and that therefore addresses all the enterprises of the sector (the engineering industry accounts for 60,000 enterprises in which about 1,650,000 workers are employed). The intended spin-off and diffusion of this product is of truly great dimensions, and regards both the enterprises of the sector and the training agencies.
- Moreover, it has been defined through a **powerful sharing element**. The thematic areas faced in the project have been defined in the national collective labour agreement: at the project level the development of the contents of the single didactic modules have been shared by the community roles;

- It guarantees **flexibility in the choice of contents and didactic format**, which, thereby, allows the maximum diffusion with regard to enterprises with differentiated needs.
- It Experiments **the training at a distance in the apprenticeship**. Training at a distance implies the interactivity and, therefore, the development of autonomy, responsibility and the need to be enterprising; capacities not required in the classroom course, but very important in the context of individual activation for a lifetime's training. It, further, guarantees the maximum diffusion and flexibility in allocation times and modalities, as well as contents.

To facilitate the distribution, the selection and personalization of the courses a **Website** has been realized, **that allows free access to all the multimedial materials** that can be used in the transversal training course for professional apprenticeships.

The thematic areas are: relational competencies, organization and economics, work relationship discipline, on-the-job safety; for each of which is offered a “package” of standard lessons, a series of in-depth studies, practice and simulations.

With a view to meeting as much as possible the needs of the companies, the output is characterized by the following:

- **Flexibility in choosing the contents:** Respecting the need for coherence and homogeneity a total of 100 hours of training are offered, in such a way as to give the company the possibility to mix the subjects to arrive at the 60 hours foreseen by the contract. The choice of hours is facilitated by a series of already structured training courses, designed according to the characteristics of the role the apprentice has.
- **Flexibility of allocation:** With a view to facilitating the use of the proposed materials in very diverse contexts, the training materials are downloadable according to different formats. Therefore, 4 different possibilities of using materials are offered:
- *Individual use with PC connected to the network:* The apprentice has access to the course online and uses all learning support services (video of presentation of modules, animated slides with
- Audio, self-evaluation test, glossary, in-depth studies). The tutor can monitor and participate in the training activities of the apprentices directly from the platform.
- *Individual use with PC not connected to the network:* The apprentice downloads the consultable materials, even offline, on his own PC (slides animated with video, exclusively audio version, in-depth studies).
- *Individual use without PC:* The apprentice stamps the material and uses it on support paper (slides with comments, in-depth studies).
- *Group use in the classroom:* It is possible to download the slides and the in-depth studies and use them in the classroom with teachers either inside or outside the company.

The Apprenticeship Institute, recently reformed in accordance with directions from the European Union, constitutes a unique instrument of “school-work” alternation legitimately in force in Italy is the means of growth (cultural, social, civil and professional) of young Italian citizens.

Training, the foundation of professional, civil, social, cultural and human growth of working citizen, as well as the main instrument for enhancing the unique and irreplaceable patrimony of the Enterprise, is a product and service of @pprendo, for that part which it plays in placing young people into the working world for the first time.

The methodology used aims at the integration of the formative experience in companies and that in the classroom. One is the continuation of the other, in an alternation that does not oppose these two moments, but integrates them. It is important to maintain a solid link with the company that hosts

the apprentice in order to develop the training course by aligning it with the company project pursued. This link favours the constant communication between @pprendo, the apprentice and the company.

The proposed training collects and takes into consideration the needs of the apprentice and the company, structuring flexible training courses. The modalities for the realization of the formative action provide for an initial period of work with the representatives of the company, in order to know the specificity and verify with them the objectives of the proposed training project.

In a second phase, the training project is refined on the basis of the needs and motivations that emerge from meetings with the apprentices, in such a way as to collect and study their motivations. After which the apprentices can be inserted into a course that is coherent both with company objectives and personal growth.

The following are the Objectives with the highest priority for the realization of the project

- the research and identification of logistical solutions distributed in the territory that allow for the maintenance of a uniform qualitative level in the allocation of training, with particular attention to those to be realized in peripheral locations;
- the in-depth study of the technical specifications relative to the project work and allocation of training units that acknowledge the ties/opportunities deriving from, on the one hand, the introduction of training at a distance; on the other hand, deriving from personalized training;
- the definition of adequate organizational, informative and formative instruments finalized to guarantee an ample and effective involvement of the company tutors, even through the creation of technical supports and specific methodologies that guarantee a constant pedagogical, technical and normative support;
- the implementation of a pedagogical/organizational model that allows the maximum adaptability of the training to a discipline that still partially in evolution, and that needs course personalizations in terms of duration and contents extremely relevant and not always foreseeable;
- the definition of the standards of evaluation of the learning and the effectiveness of the actions.

4) Roles of different stakeholders

- a) **Who is delivering work-based learning?**
- b) **Characterize the “learners”: Demographic and educational structure, payment and social situation during work-based learning?**
- c) **Learning institutions involved?**
- d) **What about the state / the government and its role in your example of work-based learning?**
- e) **Roles of professional bodies, students? / employees organizations**

The professional apprenticeship Institute foresees the drawing up of a “training contract” between the company and the apprentice, in which is indicated the professional training course that the newly employed person must undertake to reinforce the competencies and capacities requested.

The @pprendo project started out from a meeting between those with community roles and employers to discuss training on transversal themes. SKILLAB dealt with the project work and the realization of modules on relational competencies.

Those involved in the training process of young apprentices, once in the company, will be:

The **Coordinator Tutor (or Head of Human Resources of a Company)**, who manages the registrations of the Tutors and the Course students of his Company; if required, he can place the Tutors side by side in the definition and in the monitoring of the training course of the Course students.

The **Company Tutor (or Head of Human Resources of a Company)**, who manages the registrations of his Course students, establishes and follows their training course.

The **Company Course Student (or employee)** differs from the simple visitor in as much as his training course and, therefore, his overall commitment is decided by the Company he belongs to. Consequently, the Course student, on the inside of the platform, is a part of a precise group, that of his Company.

The **Host**, instead, decides autonomously which courses to follow and, therefore, which training course to go on.

The fundamental characteristics of the training courses of Apprendo have been elaborated in such a way as to respond to the indications of the norm concerned and, at the same time, satisfy the specificity of the needs of the companies.

The diffusion of the project will come about in collaboration with the territorial joint Committees (for continuous training and apprenticeships) that have the task of monitoring the progress of the institute in the territory.

- 7) **What makes the described example to good practice?**
(Please refer to effectiveness, sustainability, innovativeness and measurability also as possible criteria for examples of good practice.)
- a) **Involvement of employers? How are the involved? Are there any stated objectives for work-based learning defined together with learning institutions / “learners”?**
 - b) **Were any evaluation analyses carried out to find out how the objectives of WBL are reached in your example? Are the policy goals / objectives clear and measurable? What are the results of these evaluation analyses?**
 - c) **Are there any innovative practices of quality assurance to be found in the described example?**
 - d) **Ensuring process quality: how is it ensured that the planning of the good practice of WBL will be well implemented, evaluated and after feedback improved?**

The @pprendo project is the result of a sound bilateral cultural experience on the part of those with community roles.

It started out, in fact, from a great sharing of ideas in a meeting around a technical work-table (the National Joint Committee), of which AMMA/Skillab are a part.

The training project, realized experimentally in 2007, is now even requested by other industrial sector contracts.

Moreover, the realization of the experimentation of the modules dedicated to the training of the tutors is in course, still co-designed with a great sharing of ideas between those with community roles.

The training of the tutor will complete the training package for the professional apprenticeship.

a) The project foresees also a Catalogue for the Companies and their Professional People who wish to participate in the choosing of the training course of their own Apprentices. It presents recommended courses for every professional area, that can be adapted to one's own specificity; choosing those most suitable for company needs from the Training Units proposed.

It therefore constitutes a useful tool for indicating, at the moment of registering Apprentices, the Training Units that each entrepreneur retains more suitable for the professional growth of his collaborator.

The objective is to start up a sound collaboration between those who offer, together with the opportunity of a job also the possibility to grow and learn a trade, creating a personal patrimony and a longer life for the company, and those, like us, who have the mission of training young people; helping them to identify a course of maturity and to document the results.

b) Have the evaluation analyses, to find out how the WBL objectives reached your example, been carried out? Are the political objectives clear and measurable? What are the results of such evaluation analyses?

d)

To visualize the statistics and the progress of the students, the company Tutor has access to the @pprendo platform with username and password and enters the course he is interested in.

In the "Administration" panel he will find the link "Evaluations" (): clicking on this he will see the general evaluations obtained by all the students registered in his class.

If the effective progress of a course student does not appear, it is most probable that the apprentice is not using the account appropriately created for him, but one as a host autonomously. The Tutor should make sure that his Course students carry out the platform activities using the official account.

A single click on the name of the apprentice will isolate the evaluation line; a second click will open the file and give access to personal statistics ("Activity reports"). Diversely, by selecting a single activity it is possible to visualize the corresponding partial results of all the apprentices who have carried it out ("Results").

More precisely, only the quizzes lead to the maturation of the score: the vision of the lessons and the in-depth studies assures that, in the space corresponding to the Evaluations, a conventional value will appear. N.B.: the appearance of the value does not give any guarantee that the whole lesson was effectively heard, or that the in-depth study was read/seen; the platform records only the respective change of slides and the opening of the file.

c. and d.) Fiatest Non-formal/Informal and Formal CVT

System level Yes	Institutional level No
"Learning/didactics" Yes	Assessment/Testing Yes
Diploma Yes	Non-Diploma No
Initial education No	Further Education Yes
Contractual Yes	Non-Contractual Yes

WBL –TOI MANUAL

Project number – 2008-1-F11-LEO05-00452

PART B. Structure for describing good practices of work-based learning

In this part will be described the Romanian CVT system, focused on work-based learning. There are some distinct CVT subsystems:

1) Short description/summary of example (max. ½ page)

As is shown in the below picture, the Romanian VET system has three distinct VET subsystems:

- Apprenticeship, coordinated by the Ministry of Labour.
- Initial VET (IVET) coordinated by the Ministry of Education
- Continuous Vocational Training (CVT), coordinated by the NATB-National Adult Training Board

In this part will be described only the Romanian CVT system, focused on work-based learning.

The following distinct CVT subsystems are operating in Romania:

- i. the FORMAL training subsystem
- ii. the NON FORMAL and INFORMAL training subsystem.

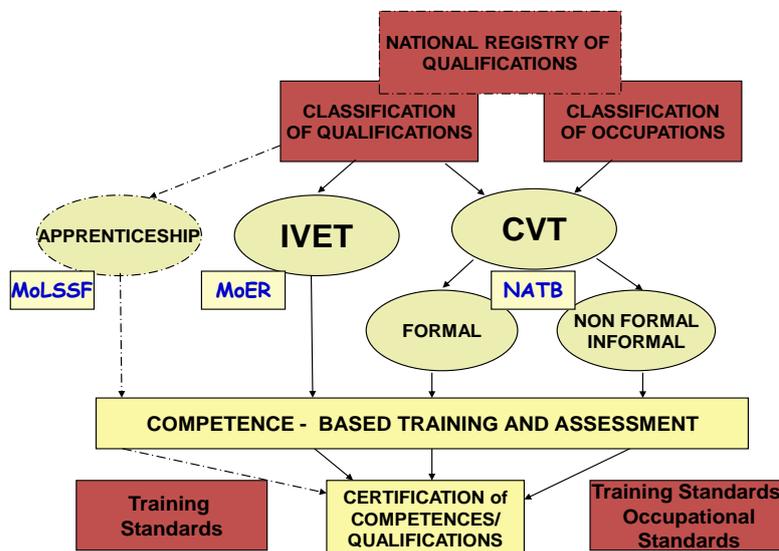


Fig.1. The structure of the Romanian VET system

For each mentioned subsystem has been adopted a specific legislation. Also very important requirements and facilities related to the Romanian's CVT have been introduced within Labour Code and Fiscal Code.

- 2) **Describe the background and the surroundings/environment of work-based learning in your example.**
- a) **How is work-based learning in your example carried out? (e.g. description of setting, learning methods?)**

a. 1. **In the FORMAL subsystem**, the main actors are *the students, trainers, tutors (for practical activities), CVT providers and the companies*. The training programs are based on so called Occupational Standards or in some cases on SPP-Professional Training Standards. The training programs are validated by a specific procedure called AUTHORIZATION which is performed by the Regional Authorization Commissions, parts of NATB. A CVT provider could be authorized for one or more training programs.

The training programs activities include mandatory 1/3 theoretical elements and 2/3 practical elements. The WBL (practical activities) are developed by:

- the CVT providers
- the students' company
- a subcontracted company having the necessary equipment and technology .A representative of the CVT provider-its own or one subcontracted from the company-supervises the practical activities.

For the qualifications training programs are required a compulsory hour's number of training activities:

- 360 hours for the qualification level 1.
- 720 hours for the qualification level 2
- 1080 hours for the qualification level 3.

For the improvement/specializing training programs the length is between 40 hours and one month. 2/3 of these programs are mandatory to be work-based learning.

The training activities are performed by authorized trainers who have to fulfil the requirements of a specific Occupational Standards focused on an official occupation of TRAINER.

a.2. **In the NONFORMAL/INFORMAL subsystem**, the main actors are: *the Competence Assessment Centre; candidates for a qualification's certification; Certified Competences Assessors; the candidates' employers*.

The assessment is based also on Occupational Standards which covers the official occupations included in the National Classification of Occupations. The validation of the competences is performed by using so called Certified Competences Assessors. The certification of these assessors is the responsibility of the NATB, by a specific direction. They are using for certification some external verifiers.

The certified assessor has also the role to recommend to the candidate what competences he/her is able to sustain.

Sometimes the assessment process is combined with a training activity, for those competences which are not fulfilled.

The professional competences assessors have to be certified against a specific occupational Standard for a specific occupation called PROFESSIONAL COMPETENCES ASSESSOR.

- b) **Show structural data of your example (number of students involved, number of learning institutions involved, number of workplaces for work-based learning), development of work-based learning in the last years**

At the end of 2007 year the NATB presented the following official data:

- a. For the FORMAL training subsystem :2457 authorized CVT training providers for 7330 training programs with:
-4929 qualifications training programs
-2353 improvement and specializing training programs
- b. For the NONFORMAL/INFORMAL training system: 42 authorized Competences Assessment Centres for 62 occupations and 38 qualifications.

The distribution of the authorized CVT providers is made visible for all 42 Romanian's counties.

- 3) **What is the purpose of work-based learning in your example? Is it part of a structural VET-programme? Is it carried out freely by the “learners”? Is there any legal / statutory background for work-based learning (and is there any purpose of work-based learning)?**

The purpose of the FORMAL CVT subsystem is to increase the competences of the adults, by offering them using authorized training providers, theoretical and practical elements specific to an occupation or a qualification.

The purpose of the NONFORMAL/INFORMAL CVT subsystem is to measure and validate, within specialized Competences Centres, all competences units specific to an Occupational Standard or only some competences. The final decision is “Competent” or “NOT Yet Competent”.

Both specific activities related to the WBL presented above-FORMAL and NONFORMAL-are part of the Romanian CVT system, as I presented in the item 1. The WBL has as main objective to increase the skills of the students, by using a real working environment or by using simulation processes. The WBL is performed also by developing practical works with results presented in front of the examination commissions. Sometimes the results of the WBL are measured by their colleagues or by their managers.

- 4) **Roles of different stakeholders.**

- a) **Who is delivering work-based learning?**

- CVT providers, for theoretical elements, and if they have an adequate technological, environment, they could offer also the practical components.
- students' companies, when the training is performed at the companies' premises. The CVT provider appoints a Tutor specialized for the practical skills.
- subcontracted companies which could assure the adequate infrastructure and real/ simulated WBL conditions.

The total responsibility for the WBL is assumed by the authorized CVT provider.

Depending of the type of the training programs, the WBL is performed:

- -during their daily working program, followed by evening theoretical classes; it is specific to the qualifications training programs, with a long training length (360 hours-1080 hours)

- between the end of the theoretical training programs and the examination, when the students have to develop a practical work, linked to the training program's curricula; it is specific to the improvement training programs.

b) Characterize the “learners”: Demographic and educational structure, payment and social situation during work-based learning?

We speak about CVT which is focused on adult learning. All people who have an official connection with the labour market could participate to the CVT programs. The students' age is between 16 and 60. The distribution by sex of students is balanced. But depends of the occupational structure, sometimes are more men, sometimes more women.

Most of the participants to the qualification training programs come from general secondary education. In opposition, the most participants to the improvement/specializing training programs have university / polytechnic studies.

Romania has a very difficult problem: due to the long length (1080 hours) of the CVT for technicians/masters there is a lack of such specialists, because they do not have time to follow such training programs.

The CVT programs are paid by:

- trainees
- companies
- unemployment fund
- ESF

The almost payments are made by employers. The financial contribution of the employers is ruled by the Fiscal Code.

The authorized CVT providers do not pay VAT for the authorized programs.

c) Learning institutions involved?

- authorized training providers
- subcontracted companies for the practical activities
- authorized Assessment Centres.
- the NATB which authorizes the Assessment Centres.
- the counties' authorizations commissions which authorize the CVT providers.

When a CVT provider makes a contract with a company able to offer practical training, this has to demonstrate it fulfils all authorization conditions.

d) What about the state / the government and its role in your example of work-based learning?

The CVT in Romania is coordinated by the NATB-National Adult Training Board which is a tripartite structure. The Governing Board of the NATB is constituted by representatives of 5 Ministries, 5 leaders of the National Representative Trade Unions and 5 leaders of the National Representative Employers Confederations. The President of the NATB is appointed by the Prime Minister.

At local level, the Authorization Commissions for CVT providers has as members the representatives of the following organizations: local employer organization, local trade union, and

local unemployment agency, local authority of Ministry of Education and local authority of Ministry of Labour.

e) Roles of professional bodies, students? / employees' organizations?

Within Romania operate some Professional Associations of TRAINERS and COMPETENCE ASSESSORS. In 2010 all authorized CVT providers have to work only with authorized TRAINERS and Certified assessors. The TRAINERS has to operate according to the specific Occupational Standard for this occupation. The CERTIFIED ASSESSORS have to operate according to the requirements of the specific occupational standard.

A new occupational standard for TUTORS who will operate in WBL is in progress to be approved by NATB.

The students participating to the training programs, including WBL, measure the quality of the training programs, of the quality of the CVT providers and of the quality of the trainers, tutors and assessors.

5) Assessment of learning success in your example of work-based learning? How are learning outcomes assessed in this context?

Assessment of the learning success is specific for each CVT subsystems:

- a. For the FORMAL CVT subsystem there are three types of assessment: *initial, during the CVT process, final examination*. The assessing instruments are authorized in the same time with the authorization of the CVT curricula. The CVT providers are using many assessment instruments which are applied to assess all competences' components, according to the EQF criteria: knowledge, skills and personal competences.

The assessment is performed by a mixed examination team, composed by two external examiners appointed by the county's authorization commission and one examiner representing the CVT provider. The examination could ask for practical demonstration in real WBL.

The graduating students of these CVT training programs receive nationally recognized certificates-qualification/improvement- with the logo of Ministry of Education and the logo of Ministry of Labour.

- b. For the NONFORMAL/INFORMAL subsystem the assessment is performed by an ASSESSOR CERTIFIED by NATB and nominated by ASSESSEMENT CENTRE. The assessor supports the candidate to understand better the occupational standard that is the subject of the assessment. The Assessment Centre is authorized for a well defined set of assessment instruments, used for assessment of the candidate's knowledge, skills and attitudes. The most used assessment instruments are: written test; interview; observation card; report from the third parties; practical work(project or a component); works' portfolio;

The assessor could ask the candidate to have a practical demonstration in a real WBL environment.

Each examination begins with a self assessment whose results are used by assessor to draw the candidate's assessment direction.

The candidates who graduate the assessment program will receive a COMPETENT Certificate for one/more competence units or for a qualification/occupation.

6) Describe the procedure for the planning process within the quality approach in use.

a. For the CVT FORMAL subsystem

There are four plans:

- the operations' plan of the CVT provider. The plan is supported by so called CVT provider's self assessment card which includes the processes with the specific KPIs for Good Practice of the CVT. It includes processes and targets for: resources-logistics and HR-, type of the training program, type of assessment instruments.
- the CVT provider's training program, with objectives, targets, necessary resources, assessment criteria.
- The CVT provider's training program assessment instruments.
- -the authorized trainers, necessary for a GOOD PRACTICE of CVT program, including for WBL component

All these plans are permanently assessed by:

- -the CVT before the external assessment performed by the NATB.
- -the NATB when the CVT provider asks for an authorization/reauthorization.
- -the NATB each year after authorization, when is performed the monitoring visit.

Based on these assessment are issued some improvement plans.

b. For the CVT NONFORMAL and Informal subsystem:

Each Assessment Centre is functioning based on the PDCA circle. Each year the Assessment Centre has to measure the maturity of all required criteria for a GOOD PRACTICE for each step of the Deming circle: P,D,C,A. The measured criteria are:

- resources, material and human
- competences assessors, with an updated experience.
- adequate assessment instruments, including to measure the candidate's WBL results
- performing assessment process, including to measure the candidate's WBL results
- promoting transparent materials about the assessment process.
- chances' equity for all candidates
- a correct complaints procedure
- a performing registration system for the assessment' results.

7) What makes the described example to good practice?

(Please refer to effectiveness, sustainability, innovativeness and measurability also as possible criteria for examples of good practice.)

a) Involvement of employers? How are the involved? Are there any stated objectives for work-based learning defined together with learning institutions / "learners"?

The CVT subsystem works with adults who work in a real working environment. They need to change their actual qualification or to improve the existing one. From this point of view their employers are very interested to offer them good training conditions, either in their companies, or within CVT providers.

The most CVT trainings are paid by employers, because they have the obligation according to the Romanian LABOUR Code to train periodically their employees. Consequently in the most cases, the training objectives are established according to the employers' requirements.

Each company has an annual training plan, with clear objectives approved by the Board of Administration, where the shareholders and interested stakeholders are present.

For many reasons the employers cooperate with the CVT providers in order to share their participation to the WBL. The trainees improve their practical skills at their working place, under the supervision of a tutor, and after that they are sent by the company's management to an Assessment Centre to validate their new competences.

b) Were any evaluation analyses carried out to find out how the objectives of WBL are reached in your example? Are the policy goals / objectives clear and measurable? What are the results of these evaluation analyses?

As is mentioned in the chapter 6, all authorized CVT programs are based on clear general and particular objectives, with distinct targets. The same requirements are for the Assessment Centres which work-based on PDCA circle.

At the end of the each authorized CVT program, the quality of the training program is measured, including the effectiveness of the practical activities. The measurement is done by the students and sometimes by the students' employers. Unfortunately till now there is no a national statistics made by NATB.

Regarding the WBL incorporated in the candidates' knowledge and skills, the most employers are asking to the CVT actors for analyses related to the effectiveness and the efficiency of the specific processes.

c) Are there any innovative practices of quality assurance to be found in the described example?

1. The authorized CVT providers have to work from 1st of January 2010 only with authorized trainers.
2. Many CVT programs combine the conventional activities with WBL and ON LINE study.
3. The Romanian LABOUR Code has specific requirements for CVT development, including the active involvement of employers.

d) Ensuring process quality: how is it ensured that the planning of the good practice of WBL will be well implemented, evaluated and after feedback improved?

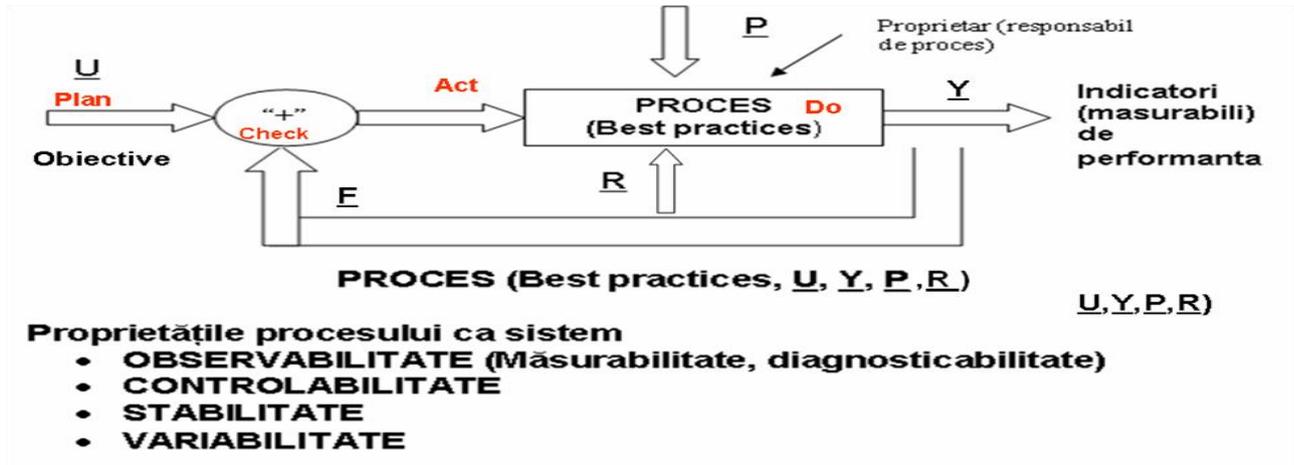
It was already mentioned at the item 6.

What is very important, due to the authorization processes, based on self assessment and external verification, good conditions for working in quality assurance system has been created.

Many CVT providers and companies where WBL is developed, have a Quality Management System certified against ISO 9001/IWA 2 standard. Consequently the requirements specific to a quality assurance are applied also to WBL practices.

A process based approach analysis has started in the Romanian CVT. New concepts are developed: process identity card; process's owner; processes interfaces;

The effectiveness of the CVT processes has started to be measured based on the systemic approach, which asks each processes has to have targets and results. I attach a proposal of a possible structure of process which will used in the Romanian CVT system for measuring the processes' effectiveness.



e.) PVI case 1 student

System level No	Institutional level Yes
“Learning/didactics” Yes	Assessment/Testing Yes
Diploma Yes	Non-Diploma No
Initial education Yes	Further Education No
Contractual Yes	Non-Contractual No

The first example of good practices for the planning phase of work-based learning: the systematic WBL process in Pirkanmaa Vocational Institute

1) Short description/summary

Pirkanmaa Vocational Institute (PVI) is a regional Vocational Education and Training (VET) provider with 12 units in south-western Finland. It is a part of Pirkanmaa Educational Consortium, which was founded in 2007 by uniting 5 VET-providers. PVI's annual number of students is about 3000. PVI provides education for 25 vocational qualifications (120 study weeks, about 3 years).

PVI is currently developing a process called Quality Assurance System. As a part of this process have been defined and implemented the work-based learning (WBL) process and directives. The definitions and directives are meant to be utilized in the introduction and coaching of teachers, students and instructors at the workplace.

WBL is provided in cooperation with several employers based on a General Agreement signed by the parties. WBL is planned, guided and based on the objectives driven of the curriculum. An individual WBL study plan (the On-the-job-learning Contract) is made for the student before or at the very beginning of the WBL-period, together with a teacher and an instructor. The plan includes individual learning objectives, tasks at the workplace and a plan for assessment and a skills demonstration, as well as a timetable for guidance discussions. The WBL-plan is a part of the student's individual study plan. The WBL is based on a student's personal interests concerning her/his own career and future. The student has to be active and assure that he/she gets enough guidance and support by the teachers and instructors at the workplace.

Students are generally not paid for their work, because as students they have certain economical benefits during the WBL-period. The WBL is also a significant part of their studies (20-40 sw) and curriculum.

2) Describe the background and the surroundings/environment of work-based learning in your example:

a) How is work-based learning in your example carried out? For instance, description of setting, learning methods.

Work-based learning (WBL) takes place at the workplace. Every vocational upper secondary qualification program includes at least 20 study weeks of WBL (= one study week equals 40 working hours for the student). It is provided in cooperation with employers based on a General Agreement signed by the parties. Prerequisites for making a General Agreement are: a workplace instructor is assigned for a student by an employee, there are enough work assignments for a learner and the work machines and equipments are up-to-date and safe.

WBL is based on the objectives driven from the curriculum. The WBL-period is planned and guided taking into account the workplace's circumstances and opportunities. The student, the teacher and the workplace instructor will make an individual WBL study plan (the On-the-job-learning Contract) for the student before or at the very beginning of the WBL-period. A study plan includes the student's individual learning objectives, her/his tasks at the workplace and a plan for an introduction, counseling, assessment and a skills demonstration, as well as a timetable for guidance discussions. The start point of the WBL period is a student's personal conception about her/his own career and future. A student has to be active and assure that he/she will be guided and supported enough by a teacher and a workplace instructor.

A summer job at a company can be accepted as a part of the studies. The prerequisite for an acceptance is that the level of learning will be evaluated by using a skills demonstration.

Training and learning methods will depend on learning objectives, work tasks of the specific company or individual features of a workplace instructor and a student. Methods of training usually used can be listed as follows: to report, to give / to watch demonstrations or a model, to ask arguments for the student's performance or to give feedback after (or sometimes during) the student's performance. One of the most effective methods is to ask for the student's feedback about the instructor's performance (or demonstration). However, this method often makes the student or the instructor feel uncomfortable and is therefore rarely used.

b) Show structural data of your example (number of students involved, duration of programme, number of learning institutions involved, number of workplaces for work-based learning, development of work-based learning in the last years).

PVI is a regional VET provider with 12 units in south-western Finland. It is a part of Pirkanmaa Educational Consortium, which was founded in 2007. PVI's annual number of students is about 3000. PVI provides education for 25 vocational qualifications (120 study weeks, about 3 years). The amount of WBL in PVI's vocational upper secondary education and training programs varies from 20 study weeks to 55 study weeks depending on the choices made by the student.

The vocational upper secondary education and training in Finland is based on the National Core Curricula. Every VET provider has to draw up locally approved curricula (based on the National Core Curricula), which form the basis for the students' personal study plans.

3) What is the purpose of work-based learning in your example?

a) Please state the aims of your example of work-based learning. Who sets the aims? Where are the aims described? Can the participants (e.g. students) vary the extent of their studies at workplaces depending on their willingness?

The general aims of WBL (based on the curricula and consensus of the employee and employer associations and educational authorities) are:

- to help a student to adapt a professional theory into the practice in real working life situations
- to help a student to learn tasks, procedures and work life rules, as well as certain targets mentioned in the curriculum
- to help a student to work safely
- to help a student to train further her/his skills
- to enhance a student's readiness for working as a practitioner as well as for life long learning
- to support the growth of a student's professional identity
- to coach a student to work in real working life situations
- to help a student to get a job
- to enable the work life representatives to participate in the training and evaluating process of their potential workers
- to enable the employer to get a well-prepared and evaluated employee after the WBL period

In Pirkanmaa area an academic year has been divided into 5 phases with 8 weeks in each of them. Usually the WBL-period lasts one phase (8 weeks). For a student it is possible to choose a personal study path, sc. *2+1-model*. In this model she/he can complete her/his studies by on-the-job-learning

(in companies) during the last study year. In this case a student has to be replaced into the apprenticeship training system in Pirkanmaa Educational Consortium.

b) Is it part of a structural VET program? Is it carried out freely by the learners?

WBL periods are parts of a structured vocational upper secondary qualification program. In this sense, they are compulsory for the students. But a student acts as an active subject in planning her/his studies by making choices concerning the studies or other opportunities available. The student's choices will be written in her/his personal study plan which will be assessed and revised by the student and her/his tutor at least twice during an academic year. A student may also suggest that her/his job experience be accepted as a part of her/his study plan. The level (grade) of know-how gained by the job experience can be evaluated by using a vocational skills demonstration.

c) Is there any legal/statutory background for work-based learning (and is there any purpose of work-based learning)?

The legislation of VET and the national core curriculum for the vocational education and training programs will give directives for WBL providing, WBL assessment eg.

d) Are the European goals and objectives for VET included in the goals you have set?

The goals are based on the national core curriculum for the vocational education and training programs, which have been written in the European framework of vocational upper secondary education and training. They will also include goals and assessment criteria for the key skills of the lifelong learning.

4) Roles of different stakeholders

a) Who is delivering work-based learning?

In the first place WBL will be delivered by the companies. A VET provider's responsibility is to ensure that the selection and coaching of a teacher, as well as coaching of a work place instructor, an employee and especially a student are successfully completed in time before the WBL period begins.

b) Characterize the learners: Demographic and educational structure, payment and social situation during work-based learning.

97 % of the students originate from Pirkanmaa Province, out of which about 45 % from Tampere. 57 % of the students are males. Most of the students have just graduated from a basic education or an additional basic education. Therefore most of the students are less than 18 years old and live with their parents at least for the first 1-2 years.

Students are generally not paid for their work. However, as students they have certain economical benefits also during the WBL-period. Some students have a seasonal or a part-time job during vacations and weekends.

c) Learning institutions involved?

The learning institutions involved are the PVI and the companies. Mostly the students look for their workplaces themselves. However the role of VET provider is important as for checking the workplace by using certain criteria (occupational safety and protectors, machines and equipments up-to-date, trained workplace instructors for supervising, guiding and assessing of a student) and signing the general agreement (GA).

d) What about the state/the government and its role in your example of work-based learning?

All vocational upper secondary qualifications, their professional goals and contents – WBL included - and durations on average are based on the local curricula driven on the national core curricula for each qualification. The student has to complete her/his qualification in three or at most in four years. The duration of WBL has to be at least 20 study weeks.

The Finnish legislation controls the WBL providing, for instance the criteria for checking a workplace, directives about occupational safety responsibilities and agreements, as well as about the national evaluation of the education coordinated by the Educational Evaluation Council in Finland. The Finnish National Board of Education has also given a quality management recommendation for VET.

e) Role of professional bodies, students, employees' organizations?

PVI cooperates intensively with partners from the working life and other VET providers in Pirkanmaa Province. The purpose of the cooperation is to develop high-class and effective WBL procedures useful to all stakeholders.

PVI has a General Agreement for WBL providing with almost 700 companies, which include thousands of placements. The companies will provide WBL placements, supervision, assessment and opportunities for vocational skills demonstrations mostly without asking for any recompense, even if the guidance may restrict the effectiveness of their production.

5) Assessment of learning success in your example of work-based learning? How are learning outcomes assessed in this context?

The assessment of learning process and results takes place weekly during the WBL period, as well as before and after skills demonstrations (student's readiness for a skills demonstration / student's success in a skills demonstration) or at the end of WBL period (if there is no skills demonstration). The method of assessment is a discussion between all three stakeholders (a student, a teacher and a workplace instructor). Eventually the student receives a grade, a pass or failed, for the completed WBL period.

6) Describe the procedure for the planning process within the quality approach in use

The procedure for the WBL planning process will be described in appendix 1, for the skills demonstration will be described in appendix 2 and a short description about vocational skills demonstrations will be described in appendix 3.

7) **What makes the described example to good practice?**
(Please refer to effectiveness, sustainability, innovativeness and measurability also as possible criteria for examples of good practice.)

a) **Involvement of employers? How are they involved? Are there any stated objectives for work-based learning defined together with learning institutions/learners?**

The systematic WBL procedure description ensures that the critical points of WBL will put enough pressure by all stakeholders. First, a teacher and an instructor involved with WBL have to be well selected and prepared. A student has to look for his/her placement with (or without) the teacher in time. When the workplace has been found, the teacher has to check the workplace suitability for the student in general (*right student into the right placement*) and by using certain criteria. If there's no valid agreement between Employee and VET provider, the next step is to sign the General Agreement. This phase includes also a report/making for the regional occupational safety agency. The next important step for all the stakeholders is to prepare themselves for the WBL period. The teacher responsible for the WBL period has to coach both work places instructors and students. Then the teacher makes other arrangements for the WBL period. At last, all stakeholders will sign a Contract upon WBL which includes the student's personal (individual) work-based learning plan.

b) **Were any evaluation analyses carried out to find out how the objectives of work-based learning are reached in your example? Are the policy goals/objectives clear and measurable? What are the results of these evaluation analyses?**

The aims of the WBL are defined as follows

- 1) to help a student to adapt a professional theory into the practice in real working life situations
- 2) to help a student to learn tasks, procedures and working life rules, as well as certain targets mentioned in the curriculum
- 3) to help a student to work safely
- 4) to help a student to train further her/his skills
- 5) to enhance a student's readiness for working as a practitioner as well as for life long learning
- 6) to support the growth of a student's professional identity
- 7) to coach a student to work in real working life situations
- 8) to help a student to get a job
- 9) to enable the working life representatives to participate in the training and evaluation process of their potential workers
- 10) to enable the employer to get a well-prepared and evaluated employee after the WBL period

The aims 1-8 will be involved with the description of the systematic WBL process and the directives and forms included. They will be evaluated by using a learning assessment method and form as well as client-satisfaction-indicators (web-based form for a student, an employee/instructor, a teacher, Webropol-software). More than 60 % will success better in WBL than in theoretical or workshop learning at school, using grades as an indicator. But there are still students who will not adapt in real working life settings without extra support. Most of the students will get a seasonal/summer job offered by their placement because of successful WBL period. The number of employment after graduation varies because of the situation in the labour market and the field of VET. The mean of employment in 2008 is quite low, about 60 %, but it has to be noticed that 15 % of graduated students will go to do their military service and 7 % continue their studies. Even if the client-satisfaction-indicators are just in the stage of initialization, it can already be stated that most of the students are very satisfied with their WBL periods.

c) Are there any innovative practices of quality assurance to be found in the described example?

The described systematic WBL procedure with a feedback and repairing system is part of the quality assurance system in Pirkanmaa Educational Consortium. It ensures that each stakeholder will be taken into account when planning the on-the-job-learning periods. The model can be used in the orientation process of students, instructors/employee and teachers. It offers a very easy way to find solutions and forms tested and assured - thus the actors are able to invest their resources to the most important thing: **learning**.

d) Ensuring process quality: how is it ensured that the planning of the good WBL will be well implemented, evaluated and after feedback improved?

The process quality will be ensured by following the description, directives and forms (websites linked to the descriptions). The process description will be evaluated every year by using inquiries, analysing data base, constituting trends and making plans for repairing the process. The process owner is responsible for this quality assurance process.

f.) PVI case 2 network

System level No	Institutional level Yes
“Learning/didactics” Yes	Assessment/Testing No
Diploma No	Non-Diploma Yes
Initial education No	Further Education No
Contractual No	Non-Contractual Yes

Two examples of good practices for the planning phase of work-based learning: 1) the development of regional cooperation via the WBL -process with other vocational education and training providers and working life representatives in Pirkanmaa Province

1) Short description/summary

Pirkanmaa Vocational Institute (PVI) is a regional Vocational Education and Training (VET) provider with 12 units in south-western Finland. It is a part of Pirkanmaa Educational Consortium, which was founded in 2007 by uniting 5 VET-providers. PVI's annual number of students is about 3000. PVI provides education for 25 vocational qualifications (120 study weeks, about 3 years).

PVI is currently developing a process called Quality Assurance System. As a part of this process have been defined and implemented the work-based learning (WBL) process and directives. The definitions and directives are meant to be utilized in the introduction and coaching of teachers, students and instructors at the workplace.

One of the specific interests in Pirkanmaa Province is to develop regional cooperation via the WBL-process by creating common tools, procedures and forms during the projects carried out with other VET-providers and working life representatives and releasing them in shared WBL-websites.

Students are generally not paid for their work, because as students they have certain economical benefits during the WBL-period. The WBL is also a significant part of their studies (20-40 sw) and curriculum.

2) Describe the background and the surroundings/environment of work-based learning in your example:

a) How is work-based learning in your example carried out? For instance, description of setting, learning methods.

Work-based learning (WBL) takes place at the workplace. Every vocational upper secondary qualification program includes at least 20 study weeks of WBL (= one study week equals 40 working hours for the student). It is provided in cooperation with employers based on a General Agreement signed by the parties. Prerequisites for making a General Agreement are: a workplace instructor is assigned for a student by an employee, there are enough work assignments for a learner and the work machines and equipments are up-to-date and safe.

WBL is based on the objectives driven from the curriculum. The WBL-period is planned and guided taking into account the workplace's circumstances and opportunities.

b) Show structural data of your example (number of students involved, duration of programme, number of learning institutions involved, number of workplaces for work-based learning, development of work-based learning in the last years).

PVI is a regional VET provider with 12 units in south-western Finland. It is a part of Pirkanmaa Educational Consortium, which was founded in 2007. PVI's annual number of students is about 3000. PVI provides education for 25 vocational qualifications (120 study weeks, about 3 years). The amount of WBL in PVI's vocational upper secondary education and training programs varies from 20 study weeks to 70 study weeks depending on the choices made by the student.

The vocational upper secondary education and training in Finland is based on the National Core Curricula. Every VET provider has to draw up locally approved curricula (based on the National Core Curricula), which form the basis for the students' personal study plans. In PVI the locally approved curricula, WBL and skills demonstrations are planned in an intense cooperation with the regional labour market and representatives of working life, as well as other VET providers in Pirkanmaa Province. Many projects are started for this purpose in Pirkanmaa.

3) What is the purpose of work-based learning in your example?

a) Please state the aims of your example of work-based learning. Who sets the aims? Where are the aims described? Can the participants (e.g. students) vary the extent of their studies at workplaces depending on their willingness?

The general aims of WBL (based on the curricula and consensus of the employee and employer associations and educational authorities) are:

- to help a student to adapt a professional theory into the practice in real working life situations
- to help a student to learn tasks, procedures and work life rules, as well as certain targets mentioned in the curriculum
- to help a student to work safely
- to help a student to train further her/his skills
- to enhance a student's readiness for working as a practitioner as well as for life long learning
- to support the growth of a student's professional identity
- to coach a student to work in real working life situations
- to help a student to get a job
- to enable the work life representatives to participate in the training and evaluating process of their potential workers
- to enable the employer to get a well-prepared and evaluated employee after the WBL period

In Pirkanmaa area an academic year has been divided into 5 phases with 8 weeks in each of them. Usually the WBL-period lasts one phase (8 weeks). The periods are scheduled in an intense cooperation with companies and other VET-providers in the Pirkanmaa area.

b) Is it part of a structural VET program? Is it carried out freely by the learners?

WBL periods are parts of a structured vocational upper secondary qualification program. In this sense, they are compulsory for the students.

c) Is there any legal/statutory background for work-based learning (and is there any purpose of work-based learning)?

The legislation of VET and the national core curriculum for the vocational education and training programs will give directives for WBL providing, WBL assessment eg.

d) Are the European goals and objectives for VET included in the goals you have set?

The goals are based on the national core curriculum for the vocational education and training programs, which have been written in the European framework of vocational upper secondary education and training. They will also include goals and assessment criteria for the key skills of the lifelong learning.

4) Roles of different stakeholders

a) Who is delivering work-based learning?

In the first place WBL will be delivered by the companies. A VET provider's responsibility is to ensure that the selection and coaching of a teacher, as well as coaching of a work place instructor, an employee and especially a student are successfully completed in time before the WBL period begins.

b) Characterize the learners: Demographic and educational structure, payment and social situation during work-based learning.

97 % of the students originate from Pirkanmaa Province, out of which about 45 % from Tampere. 57 % of the students are males. Most of the students have just graduated from a basic education or an additional basic education. Therefore most of the students are less than 18 years old and live with their parents at least for the first 1-2 years.

Students are generally not paid for their work. However, as students they have certain economical benefits also during the WBL-period. Some students have a seasonal or a part-time job during vacations and weekends.

c) Learning institutions involved?

The learning institutions involved are the PVI and the companies. Mostly the students look for their workplaces themselves. However the role of VET provider is important as for checking the workplace by using certain criteria (occupational safety and protectors, machines and equipments up-to-date, trained workplace instructors for supervising, guiding and assessing of a student) and signing the general agreement (GA).

d) What about the state/the government and its role in your example of work-based learning?

All vocational upper secondary qualifications, their professional goals and contents – WBL included - and durations on average are based on the local curricula driven on the national core curricula for each qualification. The student has to complete her/his qualification in three or at most in four years. The duration of WBL has to be at least 20 study weeks.

The Finnish legislation controls the WBL providing, for instance the criteria for checking a workplace, directives about occupational safety responsibilities and agreements, as well as about the national evaluation of the education coordinated by the Educational Evaluation Council in Finland. The Finnish National Board of Education has also given a quality management recommendation for VET.

e) Role of professional bodies, students, employees' organizations?

PVI cooperates intensively with partners from the working life and other VET providers in Pirkanmaa Province. The purpose of the cooperation is to develop high-class and effective WBL procedures useful to all stakeholders. One of the specific interests in WBL is to develop regional co-operation in *WBL-learning and skills demonstration* -process in Pirkanmaa Province by creating common tools, procedures and forms (WBL-portals and shared projects) with other VET providers and working life representatives.

PVI has a General Agreement for WBL providing with almost 700 companies, which include thousands of placements. The companies will provide WBL placements, supervision, assessment and opportunities for vocational skills demonstrations mostly without asking for any recompense, even if the guidance may restrict the effectiveness of their production.

5) Assessment of learning success in your example of work-based learning? How are learning outcomes assessed in this context?

The assessment of learning process and results takes place weekly during the WBL period, as well as before and after skills demonstrations (student's readiness for a skills demonstration / student's success in a skills demonstration) or at the end of WBL period (if there is no skills demonstration). The method of assessment is a discussion between all three stakeholders (a student, a teacher and a workplace instructor). Eventually the student receives a grade, a pass or failed, for the completed WBL period.

6) Describe the procedure for the planning process within the quality approach in use

The procedure for developing regional co-operation in *WBL-learning and skills demonstration* -process in Pirkanmaa Province gets on by the following phases:

- a. to survey the candidates for planning a project,
- b. to make a project plan
- c. to make an application for funding,
- d. to set a project organisation
- e. to kick off and carry out the project,
- f. to evaluate and report the results
- g. to make a plan for the further cooperation and dissemination.

The stakeholders are the working life representatives (employers and employee), the VET-providers and the regional Occupational Safety Agency.

The purposes of the recent project going on in Pirkanmaa Province are to create common tools, procedures, forms and WBL-portals (for instance <http://marata.topirkka.fi>), to develop occupational safety, to provide courses for workplace instructors and teachers, to develop and test different models to train the instructors and to develop WBL for those students who need special support for their learning.

A new innovation needs an initiator who has an idea required by each stakeholder. The role of an initiator is to arrange a meeting surround an idea and to act as an activator in the first beginning. As an initiator could act for instance a teacher who has noticed a certain problem, which needs cooperation with other stakeholders to be solved. If a VET provider organisation is flexible and

opened enough, it will offer a good “substrate” and support for changing an idea to a project plan. In Finland there are many project funding resources with criteria for cooperation with other VET providers and work life representatives.

7) What makes the described example to good practice?
(Please refer to effectiveness, sustainability, innovativeness and measurability also as possible criteria for examples of good practice.)

a) Involvement of employers? How are they involved? Are there any stated objectives for work-based learning defined together with learning institutions/learners?

The stakeholders in the process of the development of *WBL-learning and skills demonstration* in Pirkanmaa area are the working life representatives (employers and employee), the VET-providers and the regional Occupational Safety Agency. The activities of this process will be carried out in the shared projects and in the professional boards for qualifications. The purposes of the recent project going on are to create common tools, procedures, forms and WBL-portals (for instance <http://sote.topirkka.fi>), to develop occupational safety, to provide courses for workplace instructors and teachers and to develop and test different models to train the instructors and to develop WBL for those students who need special support for their learning.

b) Were any evaluation analyses carried out to find out how the objectives of work-based learning are reached in your example? Are the policy goals/objectives clear and measurable? What are the results of these evaluation analyses?

The aims of the WBL are defined as follows

1. to help a student to adapt a professional theory into the practice in real working life situations
2. to help a student to learn tasks, procedures and working life rules, as well as certain targets mentioned in the curriculum
3. to help a student to work safely
4. to help a student to train further her/his skills
5. to enhance a student’s readiness for working as a practitioner as well as for life long learning
6. to support the growth of a student’s professional identity
7. to coach a student to work in real working life situations
8. to help a student to get a job
9. to enable the working life representatives to participate in the training and evaluation process of their potential workers
- 11) to enable the employer to get a well-prepared and evaluated employee after the WBL period

The amount and quality of the cooperation between working life representatives and other VET providers in the WBL field can be evaluated by using the number of shared projects in Pirkanmaa area as an indicator. In 2009 the number of projects has increased from 1 to 4. All projects will take more than one year and two of them have started because of the dissemination of good WBL practises (produced in earlier projects). The Quality of the projects will also be evaluated in different project meetings and recorded in the project minutes and reports.

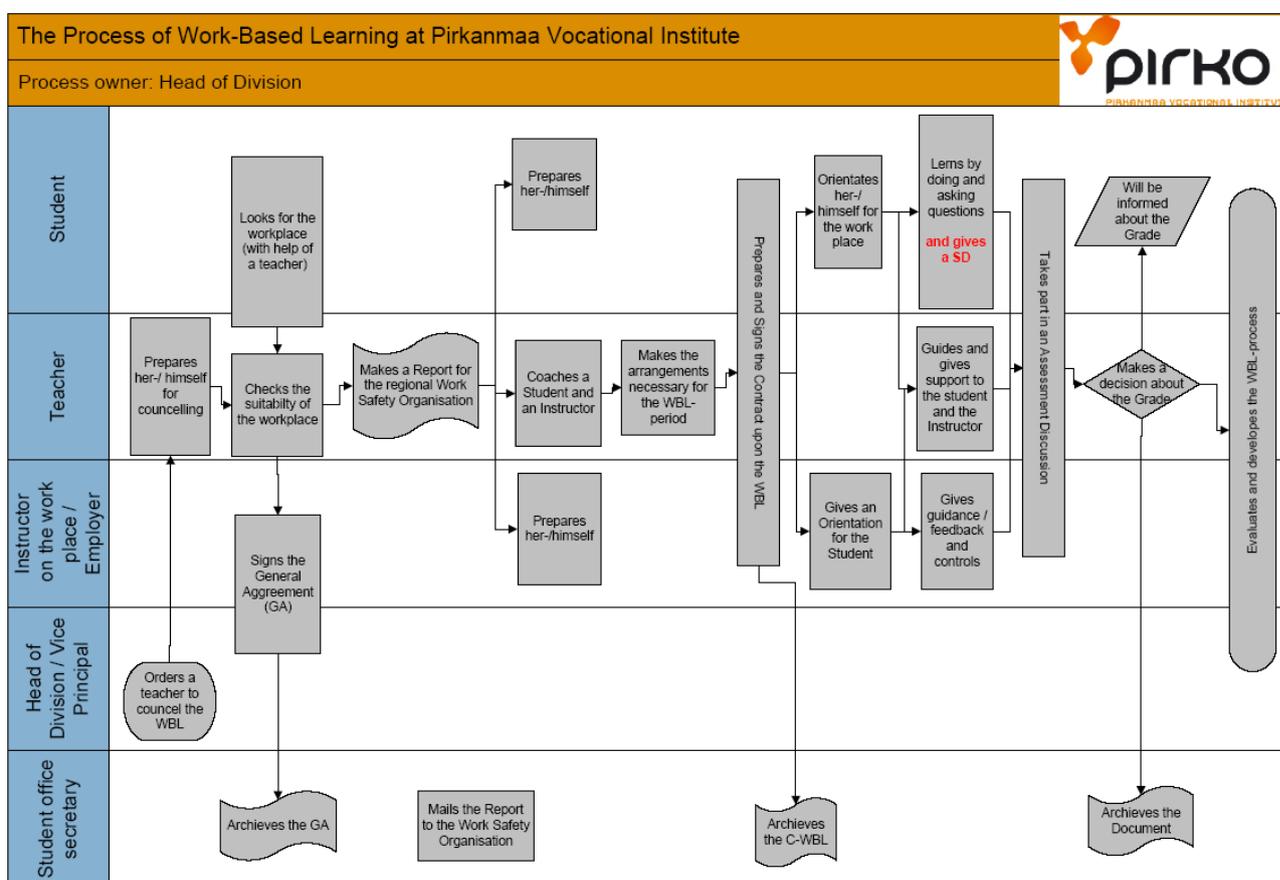
c) Are there any innovative practices of quality assurance to be found in the described example?

The systematic and goal-orientated cooperation with companies and VET providers in Pirkanmaa Province will offer a real benchmarking setting, which stakeholders will learn from each other and

the voice of the labour market will be heard in. It also makes the WBL periods easier to carry out especially from an employee's point of view (equal procedures and forms and shared compatible scheduling in the whole province). The shared WBL portals (websites) for different vocational fields will form a useful tool for cooperation and planning, regardless of the long distances between the partners.

d) Ensuring process quality: how is it ensured that the planning of the good WBL will be well implemented, evaluated and after feedback improved?

The regional cooperation will repair itself because it is carried out voluntarily. It will continue as long as the cooperation procedures will produce results and fulfil needs defined by stakeholders. It is very important to have a motivator, an initiator and a leader for the cooperation.



Vocational skills demonstrations (VSD) in vocational upper secondary education

Why?

- to improve co-operation between vocational education and training and working life
- to help to improve the consistency of student assessment and to provide a link between working life and the assessment of students' vocational skills

What are skills demonstrations?

- planned, organised and assessed jointly by the education provider and the working life representative
- in VSDs the student shows her/his vocational skills in work situations and competence during the vocational study module(s)
- VSDs form a significant part of the student assessment



- VSDs are primarily organised at the workplace in conjunction with on-the job-learning, but they can also be organised at an educational institution
- VSDs span the duration of the students` education and training

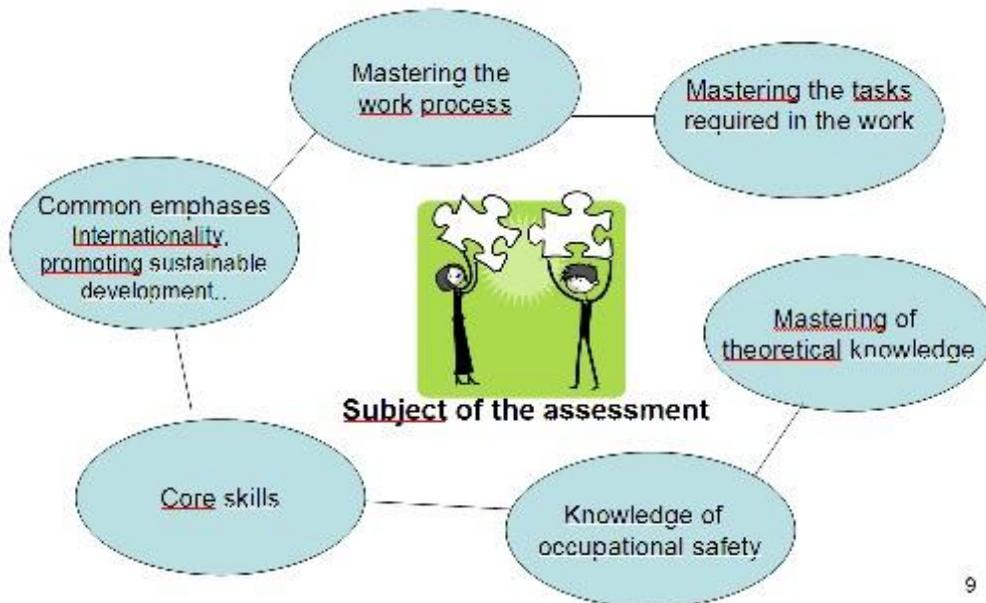
National vocational skills demonstrations materials

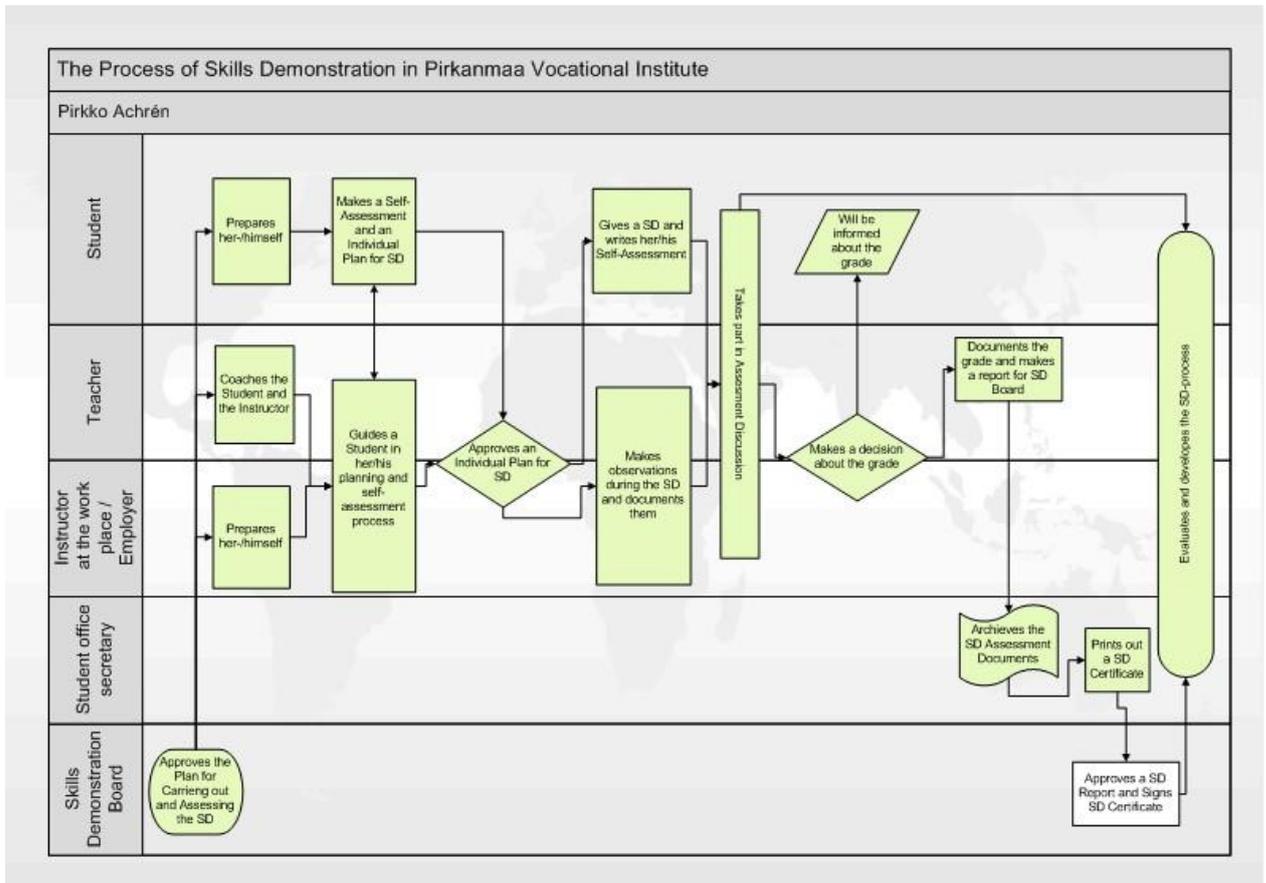
- can be used as a support tool when organising and assessing vocational VSDs
- the materials contain:
 - a description of the competence to be demonstrated
 - instructions concerning the ideal environment or work place for the organisation of VSDs
 - targets and criteria of assessment

Assessment of vocational skills demonstrations

- it`s required that the student, the working life representative and/or the teacher take part in an assessment discussion
- the assessors must be experts in the vocational field in question
- decisions on the assessments` outcome are made by the working life representative and teacher
- the education provider defines the relationship of assessment – both VSD and others - in each study module
- in the figure (below) you will see the objects of the assessment of VSD

Assessment of skills demonstration





g.) MBO Case 1 vocational

System level Yes	Institutional level Yes
“Learning/didactics” Yes	Assessment/Testing Yes
Diploma Yes	Non-Diploma Yes
Initial education Yes	Further Education No
Contractual Yes	Non-Contractual No

PART B. Good practices of work-based learning in the Netherlands

The example below, gives a description of the two learning pathways in VET within the mainstream VET-system

1) Short description/summary of example (max. ½ page)

With the implementation of the WEB, the new act on Vocational Education and Training, in 1996 the two learning pathways in VET (work-based or school based) were put in the same qualification framework. This means that the same qualification can be achieved through different learning pathways.

1. The school based pathway (BOL):

About 65% of the VET students attend the school based learning pathway. They have the status of a student (grosso modo equal to students in HE), including the right for student-grants and generally they are not paid for the compulsory periods of work placement during their education. The share of work placement as part of the entire curriculum varies from minimal 20% to a maximum of 60%, depending on the didactical approach, the branch and the level of education/training. Colleges have a high degree of autonomy regarding the choices that are made here.

2. The work-based pathway (BBL):

About 35% of the VET students attend this learning pathway. They have the status of an apprentice and they are paid for their work according to the agreements made by the social partners. Generally, they combine four days working in the week with one day College. There are however some different models according to the branch.

The proportion of work-based learning versus school based learning slightly fluctuates according to the economic situation.

Both learning pathways offer programs on four different levels, ranging from the assisting level to the mid-management level with qualification profiles that are drawn up by branch commissions representing the social partners and the world of education and training. A recognized work placement period (WBL) in both models, can only be done at a recognized learning company. The accreditation of these companies is done by so called 'Centres of Expertise'. In the Netherlands, there are 17 Centres of Expertise, covering all a certain branch from trade and industry. Together with the colleges, the social partners, training firms, stakeholders on education and training and the government, they make a contribution to good and attractive vocational education.

2) Describe the background and the surroundings/environment of work-based learning in your example.

In the Netherlands apprenticeship or work-based learning has been more or less rediscovered in the late nineties, but with new learning and working arrangements and with new connections between school and work-based learning. It has become part of an elaborated system of vocational education, which includes the two already mentioned main pathways with different combinations of school and workplace learning. As objectives of vocational education have been expanded to include both effective problem-solving on the job and work process knowledge, workplace learning has become more important. The quality of apprenticeship however is heavily debated. There are

two main issues: the quality of workplace learning (content, guidance, assessment) and the quality of the connection between workplace and school-based learning.

Regulation by government as well as by the expertise centres (from trade and industry) and employer organisations, designed to uphold the quality of training in apprenticeship, is enlarged and updated.

Employers and vocational schools strive for high quality outcomes. Different and more intensive interaction patterns between employers, vocational schools and the students are developed to improve the connection between learning in school and in the workplace.

a) How is work-based learning in your example carried out? (e.g. description of setting, learning methods?)

Work-based learning is carried out in companies or other organizations offering a real working environment. The tasks to be fulfilled during the work placement period are the result of the needs of the student, the possibilities of the company and the requirements of the VET program. There is a high individual differentiation, which requires a high quality of the connection between workplace and school-based learning and the interaction (guidance) between college and company.

The expected learning outcomes from the workplace period are formulated and recorded in a work placement assignment document. Every student has a work supervisor from the company, who is responsible for the guidance on the job and for the approval of the expected learning outcomes.

Generally, it is expected that the trainee works on the learning targets by being involved into day-to-day operations of the company, with a changing focus according to his expected learning outcomes.

Moreover it is expected that a tutor from the college maintains regularly contact with the work supervisor and the student. In this respect, in all situations there is always the communication/guidance triangle of supervisor company- tutor college – student.

b) Show structural data of your example (number of students involved, number of learning institutions involved, number of workplaces for work-based learning), development of work-based learning in the last years.

In the Netherlands, there are approx. 320.000 school based VET-students and 180.000 work-based VET-students.

The training for both groups is offered by 70 VET-institutions in the Netherlands in cooperation with more than 185.000 accredited learning companies.

In the last years the systems of work-based learning and school based learning are growing towards each other, mainly as a result of an increasing attention for WBL in the school based system. Instead of just ‘getting an impression of how a company works’ the attention has shifted to well supervised learning targets. As a result of the increasing autonomy of the VET Colleges concerning the didactical methodologies and the shift to competence based learning, there is a tendency of learning certain subjects on the job, which used to be learnt at school. Moreover Colleges try to give their students assignments, that meet real needs of the company. Due to the financial crisis at this moment, there are signs of shortages of work placements in certain branches.

3) What is the purpose of work-based learning in your example? Is it part of a structural VET-programme? Is it carried out freely by the “learners”? Is there any legal / statutory background for work-based learning (and is there any purpose of work-based learning)?

It is compulsory and always an integrated part of the VET-program. the minimum and the maximum period is mentioned in the act on Vocational Education and Training (WEB). The work-based system knows a minimum of 60% of the learning program, but no maximum. At the school based system the minimum is 20% and the maximum 60%.

With the introduction of Competence based learning, work-based learning has become even more important than before. Moreover it is more integrated with the theory from school.

4) Roles of different stakeholders.

a) Who is delivering work-based learning?

Companies, mainly SMEs are delivering work-based learning. In the health- and care programs, WBL is offered by hospitals, rest homes etc. These companies or institutions need to be accredited by the branch based ‘Centres of Expertise’ as a learning-company. One of the requirements of such a learning-company is, that the student guidance is done by a work supervisor who is in possession of a supervisor certificate, also delivered by the ‘Centres of Expertise’.

In the work-based system (BBL) students generally work four days in the week and attend school for one day. In some branches however (shipping), the school part is done in a number of blocks.

In the school based system (BOL), the internships are generally done in a number of blocks, but with the introduction of ‘competence based learning’, there are more and more examples of integrated learning, resulting in a few days school and a few days company in a week.

b) Characterize the “learners”: Demographic and educational structure, payment and social situation during work-based learning?

Most students have at least reached the age of 16 and occasionally 15.

The majority comes from a VMBO (prevocational, general secondary education), but others come from the HAVO, which gives actually access to ‘higher professional education’. For different reasons those students can nevertheless make a choice for a VET pathway.

In the work-based system (BBL) students or (better) apprentices obtain a salary, which is agreed upon by the social partners of the branch.

In the school based system (BOL), the situation differs from one company to the other and from one branch to the other. In hospitality and technical professions students generally obtain a modest salary, whilst in the ‘Health and Care’ branch in general there are no salaries paid to students. Students in the BOL however obtain a (very modest) student grant.

c) Learning institutions involved?

All government funded VET-colleges in the Netherlands are involved.

These are:

- 40 ROCs (Regional Education and Training Centres)
- 12 AOCs (Agricultural Education and Training Centres)
- 18 Vakscholen (Training centres in one specific branch)

All these institutions are, in close cooperation with the surrounding, regional service, trade and industry in charge of work-based learning.

d) What about the state / the government and its role in your example of work-based learning?

The described practices in BOL and BBL are based on the 1996 Adult and Vocational Training Act (Wet Educatie en Beroepsonderwijs, WEB), which has been evaluated in 2001. At the basis of this evaluation the Minister of Education considered improvement necessary of the national vocational skills standards, the so-called qualification system. Since then, the Ministry has aimed at developing a new qualification system, which is based on competences and is more closely linked to vocational practice and should provide a more solid basis for the adaptability of workers to a continuously changing labour market. This development is still going on as to date.

The government is responsible for the system of initial education. Initial education partly extends to vocational training. That is, government-funded education is guaranteed not only during school age, but every citizen is entitled to funded education at least until the level of intermediate vocational education, also in case he/she has already entered the labour market.

Concerning the control on quality, the government, by way of the 'Inspection', does research at the VET colleges, but not at the companies for WBL. The quality of this has to be guaranteed by the 'centres of expertise'.

e) Roles of professional bodies, students / employees organizations?

The accreditation of the learning companies is done by 17 'centres of expertise', covering the entire world of services, trade and industry.

The representation within the board of the 'centres of expertise' is always tripartite

Employers

Employees

Education

Moreover, the 'centres of expertise' are responsible for the qualification structure, the job competence profiles and the regular update of these. They are the linking pin between employers and education.

The opinion of the students about WBL is part of the quality assurance of the VET Colleges.

The interest of the students is represented through the organization JOB (Youth in VET) and they conduct also research on the opinion of students about the quality assurance of WBL.

5) Assessment of learning success in your example of work-based learning? How are learning outcomes assessed in this context?

The learning targets for the period of internship are formulated in close consultation with the company, the college and the student. Learning outcomes for every VET program are formulated as competences (skills, knowledge and job related attitude). There are however no guidelines about competences to be learnt on the job and competences to be learnt at the College. This is up to the involved actors (triangle company-college-student) and might differ from case to case.

Assessment of learning success takes place in the form of regular progress reports which have to be compared to the initial project plan. In addition, conversation (visits) between the tutors from the college and the supervisor from the company, including the student should guarantee timely assessment. At the end of the internship there is a general assessment of the learning outcomes conducted by the triangle and the student is expected to draft a final report, which has to be approved by the tutor from the college and the supervisor from the company.

6) Describe the procedure for the planning process within the quality approach in use.

There are different ways of describing the planning process and it varies per school. The main stadia of the internship are described in a contract, which is signed by the company, the college and the student.

7) What makes the described example to good practice?
(Please refer to effectiveness, sustainability, innovativeness and measurability also as possible criteria for examples of good practice.)

a) Involvement of employers? How are they involved? Are there any stated objectives for work-based learning defined together with learning institutions / “learners”?

Yes, there is a contract, mentioning the activities of the students and the envisaged learning outcomes. In order to encourage employers to take trainees on board, college, company and student are trying to find a way that not only helps the student to fulfil his internship, but that also meets some needs of the company.

b) Were any evaluation analyses carried out to find out how the objectives of WBL are reached in your example? Are the policy goals / objectives clear and measurable? What are the results of these evaluation analyses?

Yes, this is already described under point 5. Through the close cooperation between college and company, there is always an evaluation (including the student) to improve the situation for the future and to create reflection for all actors involved. If policy goals and objectives are well described, they are also measurable.

On the national level, the discussion on quality assurance does not always match with the daily practices in the colleges, due to large differences between the various regions, levels, and branches. It is very important to have a differentiated look at situation and problems of WBL, but research mostly gives only general descriptions.

- c) **Are there any innovative practices of quality assurance to be found in the described example?**

It is not mentioned until now, but there is an increasing use of ICT in the guidance of students. As it is not always feasible for the college tutor to visit the student regularly at the company the possibilities of ICT cannot be underestimated. This is certainly the case if the internship takes place in another country. Something should be encouraged very strongly.

- d) **Ensuring process quality: how is it ensured that the planning of the good practice of WBL will be well implemented, evaluated and after feedback improved?**

This is all part of the planning-control cycle. There remains however one major problem, that is difficult to solve. Most college-tutors do not have enough time to visit the companies regularly, as the budget for the Colleges is too limited to realize this in an optimal way.

Project NL-1

Main angle(s) of incidence: integrated approach and pedagogical learning climate

Institution

Albeda College
Rosestraat 1101
3071 AL Rotterdam
The Netherlands

Location project

Baljuwstraat
Rotterdam

Education and vocational education. Big number of immigrant students. Project took place at Voorwerk (adult) education department

Contact person

Ms. M. J. Liefwaard, advisor executive board
Rosestraat 1101
3071 AL Rotterdam
m.liefwaard@albeda.nl

Experience

Teacher, counsellor, coordinator development projects, especially on students at risk, advising and policy-making

Project or initiative

Project title

Voorwerk

Main goal:

Reducing early school leaving by:

- Cooperation education and youth care.
- Immediate reaction on misbehaviour (short time-out)
- Special needs support structure
- Active learning by practical training in working settings;
- Employment-oriented training for students who lack the ability to obtain a qualification (yet)
- Success will be measured by monitoring drop out rates and by evaluation

A special team of advisors from education en youth welfare care assists the project

Target learners

- 240 students on the project
- 16 – 20 years
- Students learn on de the lowest level technical education
- Problems students:
 - Social emotional problems
 - Lacking social skills
 - Big city problems: one parent, drugs, living environment etc.
 - Repetitive dropouts (different schools); students who lack the ability to obtain a qualification (at this moment)

Status of project

Established:

Working methods are established with measurable success (75% work and/or Further education)

Developing

One-year experience with cooperation with youth care. This resulted in ‘short time out’: students work in special environment and are trained and coached by youth care worker.

Cooperation with elementary vocational training to write individual education plan for students with special needs

Unique features of programme

- Special educational methods: practical training to get work & to keep work.. Focus on social competence
- Individual education plans
- Only 10 hours study program (individual educational route) 3 days work placement
- Individual personal & career guidance
- Special needs system: teacher-counsellor, school social worker, youth care worker, career counsellor
- Immediate reaction on behaviour. Just in time care, short time out outside school: students work in special environment under supervision of youth care worker and teacher and are trained (behaviour) and coached by them.
- Cooperation with elementary vocational training to write individual education plan for students with special needs
- Circuit education. In-school practical training in almost all branches of industry
- Language in books reduced & replaced by photo

Partners

- Social work/services
- Career advisor (intern)
- Youth welfare care
- Municipal Health Service
- School attendance officer

Emerging messages

- need to strengthen social & career guidance
- need to change environment to engage learners (more practical & competence based learning)
- Importance of Initial advice and guidance strategy for learners
- Importance of small groups
- Importance of giving room for orientation and discovering own talents.
- Importance of acting in time: behaviour, problems

Conclusions

- Many learners at risk of dropping out have been dropped out before from other schools.
- Many students at risk have social emotional problems, cognitive problems and are already known by youth care or youth social work. Until now school & social services & youth care worked isolated on the problems of the same students. Closer links are therefore needed
- What stops learners dropping out is personal attention & daily stressing the responsibility for learning & working.

Project NL-2

Main angle(s) of incidence: integrated approach – didactical approach

Institution

ROC West-Brabant
Van Konijnenburgweg 16
4611 HL Bergen op Zoom
www.rocwb.nl

ROC West-Brabant is a college for secondary education, vocational training and adult education.

Contact person

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Project or initiative

Project title

Traject

Description

Main objectives of project:

- to enhance second chance schooling
- to enhance lifelong learning
- to enhance the entrance of the labour market for target groups
- to enhance the positive participation of social excluded in society

Success will be measured:

- by evaluation of the targets
- by account for the targets in an annual report

Target learners

- 380 learners
- between 12 and 55 years old
- different levels of educational experience
- youngsters at risk of social exclusion or being marginalised in society
- ethnic and other minority groups
- adults with poor basic skills

Status of project

The project is in progress.

Unique features of programme

- Tailor made routings in a combination of theory and practice, with the career as the leading factor
- matching of apprenticeships
- Guidance and coaching

- Development of competence profiles in function of self directed learning
- A structured monitoring system regarding reflection and feed-back
- Working in an integrated way with relevant stakeholders
- Development and implementation of a total approach of groups at risk
- Developing the own responsibility of the learners with the help of good guidance by coaches and a structured monitoring and reflection system
- Development of a practical learning environment for every learner
- Development of a target group approach to a sector career approach
- Developing and implementation of a continuous quality improvement traject in order to upgrade professional thinking and handling of staff

Partners

- Business enterprises
- Branche organisations
- Social services of municipalities
- Secondary Schools and schools for vocational training
- Mental Health support services
- Youth help organisations
- Representatives of target groups

Emerging messages

- Importance of personal attention and tailor made approach in order to improve behaviour
- Importance of monitoring learners in schools before and after Traject (VMBO and MBO)
- Importance of structured guidance by career guides
- need to change environment to engage learners (competence based in practical and theoretical situation)
- Importance of a structured way of reporting the progress of the learners
- Importance of small groups

Conclusions

- Learners at risk of dropping out take initiative and their own responsibility after being approached in a positive way
- Many students at risk and adults have social, emotional, cognitive and traumatic problems. Close links to all partners in (mental) Health care are needed
- What stops learners dropping out is feeling the respected attention of the guides, learning to take their own responsibility, working in a structured way on their own targets

h.) 3s Case 1 student

System level No	Institutional level Yes
“Learning/didactics” Yes	Assessment/Testing Yes
Diploma Yes	Non-Diploma No
Initial education Yes	Further Education Yes
Contractual Yes	Non-Contractual No

PART C: An example of good practice for the planning phase of work-based learning: The professional internship at the University of Applied Sciences Technikum Wien

1) Short description/summary

The University of Applied Sciences Technikum Wien offers various bachelor and master degrees, both in part-time and full-time, related to information technology, electronics, engineering, environmental technologies and transportation. All of the degree curricula integrate business knowledge and usually offer opportunities to study abroad to gain international experience. Full-time students at bachelor level have also to acquire additional job experience by completing an internship lasting up to six months depending on the degree program. The professional internship is an important component of the overall degree program, since it provides students with a real life professional learning experience.

‘The University of Applied Sciences Technikum Wien promotes research and development by incorporating applied theory in the classroom and encouraging collaborative research partnerships with industry and business. With an emphasis on applied learning, many of the school's research projects have resulted in innovative solutions for various technical problems in the industry.’²⁷
(Technikum Wien)

It is either the responsibility of the educational provider or the student to search for the internship depending on the degree program. In case the student has to find a placement, the University of Applied Sciences will provide assistance and has to approve the suitability of the placement. Before attending a professional internship the student has also to find a tutor accompanying the learning experience. The tutor and the student draw up a project plan defining the tasks to be fulfilled at the workplace and an educational contract is signed between the student and the company. The progress is continuously assessed and eventually a final evaluation together with the respective company is carried out. The experience culminates in a final presentation and the accreditation of the professional experience as a part of the degree program.

2) Describe the background and the surroundings/environment of work-based learning in your example:

a) How is work-based learning in your example carried out? For instance, description of settings and learning methods

Work-based learning takes place at the workplace. A summer job at the same company prior to the internship is highly recommended for reasons of efficiency and training. The tasks to be fulfilled during the internship have to focus on technical issues in the following fields: research and development, company automation, project work, planning, initial operation, quality control, company organization, production, testing, sales or similar. The workplace must facilitate ‘contextual engineering work’.²⁸

If the degree program attended by the student carries out research and development projects of high quality in cooperation with industrial partners for a whole study term, the student has also the possibility to credit such experience.

²⁷ <http://www.technikum-wien.at/en/home/> (27.1.2008).

²⁸ Guidelines for professional internships 2009. Technikum Wien.

Learning methods will depend on the specific company. Usually instruction, learning on the job and project responsibilities will be part of the learning methods used. Generally, it is expected that the trainee gains insight into day-to-day operations of the company.

b) Show structural data of your example (number of students involved, duration of programme, number of learning institutions involved, number of workplaces for work-based learning, development of work-based learning in the last years).

The University of Applied Sciences Technikum Wien is one of the largest universities of applied sciences in Austria. It has currently about 2500 students, of whom about 85 % are male, and about 400 full- and part-time teachers. The number of students accounts for about 8 % of all students in the sector of universities of applied sciences. Technikum Wien has expanded heavily in the past decade: the number of students has increased from around 300 in 1997 to about 2500 in the last year.²⁹

Last year about 1,100 new students attained a study place in one of the 26 degree programs, while around 1,800 persons have applied for a study place. About two-thirds of new entrants will attend a degree program at bachelor level and are expected to participate within a professional apprenticeship lasting between 12 and 15 weeks in the coming three years apart from those who can credit their practical experience from their company. Given the relationship of part-time and full-time degrees one can expect that at least 500 students will participate within a professional internship in the coming years from last years' entrants. The number of applications has more than doubled in the last five years.³⁰

The response by the business world is very positive. Some degree programs like business informatics do even have an oversupply of internship opportunities, so that students can choose between different companies. For some students the practical training is the first step into their working life.³¹

3) What is the purpose of work-based learning in your example?

a) Please state the aims of your example of work-based learning. Who sets the aims? Where are the aims described? Can the participants (e.g. students) vary the extent of their studies at workplaces depending on their willingness?

First, the aim of the internship is to create a link between theoretical education and professional experience. Students can apply their gained theoretical knowledge to real life problems and learn about the expected requirements at the workplace.

'Applied techniques and knowledge should be learned based on the theoretical expertise learned in class. Processing and solving real problems in the professional field should be enabled under supportive instruction.'³² (Technikum Wien)

If the internship takes place in one of the first terms, the professional experience acquired during work can also be integrated to discussions and projects in classrooms. But normally the professional experience is envisaged at the end of the study period to allow for a better integration

²⁹ http://www.fhr.ac.at/fhr_inhalt/00_dokumente/Dokumente/Statistiken_2007-08_Web.pdf (27.1.2009).

³⁰ 3s Unternehmensberatung (2008): Jahresbericht für die FH Technikum Wien.

³¹ <http://www.technikum-wien.at/studien/bachelorstudien/wirtschaftsinformatik/studienaufbau/praxissemester/>.

³² Guidelines for professional internships 2009. Technikum Wien.

of students into the labour market. The stakeholders involved set together the respective aims of the internship specified within a project plan. The duration of an internship might be prolonged if the company and educational institution involved do agree.

Second, the University of Applied Sciences Technikum Wien aims to offer sufficient placements to its students and, third, it wants to fulfil the expectations of stakeholders as agreed in the course of the initial project plan.

b) Is it part of a structural VET program? Is it carried out freely by the learners?

The internship is part of a structured degree program. In this sense, it is compulsory for the students, even though the decision to apply for a degree program at a university of applied sciences is based on the personal motivation of an individual.

c) Is there any legal/statutory background for work-based learning (and is there any purpose of work-based learning)?

Accreditation regulations for Universities of Applied Sciences regarding full-time degree programs demand for a professional internship to be integrated within a curriculum. The University of Applied Sciences Technikum Wien envisages regularly exceeds the specified minimum duration.

The legal background of an internship depends also on the industry the trainee is working for. Partly the collective agreements specify the terms of employment including payment. A minimum wage for trainees is not in place.³³ It is as well possible that the student works under a normal employment status as an employee. In this case, the Austrian labour law including social security payments is valid.

d) Are the European goals and objectives for VET included in the goals you have set?

The University of Applied Sciences Technikum envisages to achieve ‘an integration in the European framework of higher qualifications for the employment market’. Hence, international contacts are supported, international exchange and mobility is fostered, communication skills in at least two languages should be acquired, study contents are standardised and a Europass-Portfolio (CV, Language certificate, Diploma supplement, record of mobility) is supported apart from ‘supporting key skills in the sense of the European Qualifications Framework’.³⁴

Professional internships aiming in particular to create a link between theory and practice are related to these overall goals of the University of Applied Sciences Technikum Wien. This can be seen most visibly from the commitment of University of Applied Sciences Technikum Wien to promote professional internship in foreign countries. Practical trainings are also preferred to academic exchanges abroad. Furthermore, learning outcomes of internships have to be clearly stated in the course of accreditation of study degrees and described in diploma supplements.

³³ http://www.jugend.gpa-djp.at/servlet/ContentServer?pagename=A01/Page/Index&n=A01_6.7 (27.1.2009).

³⁴ Quality Management Handbook of the University of Applied Sciences Technikum Vienna 2008. Technikum Wien.

4) Roles of different stakeholders

a) Who is delivering work-based learning?

In the first place it is the company, which is delivering work-based learning. It offers various opportunities for ‘on the job learning’ to the students. At the same time, the students require specific technical knowledge from the University of Applied Sciences to fulfil these tasks.

The internship should last for a continuous period of 12 to 15 weeks (5 days a week). During that period some more non-technical courses are still taught in blocks or by using distant learning facilities by the educational provider.

Moreover, the person responsible for the trainee at the respective company may hold guest lecture during the academic year prior to the internship. The content of lectures could even be preparatory for an internship. It is expected that the training officer from the company is in possession of a higher education degree.

b) Characterize the learners: Demographic and educational structure, payment and social situation during work-based learning.

A great majority of students, about 90 %, originate from Vienna or the boarding province of Lower Austria. About 60 % has graduated from a secondary technical or vocational college and about 30 % graduated from a secondary academic school. This means that all students are older than 18 years.

About half of the student body entering the University of Applied Sciences Technikum Wien are part-time students earning a regular income. Those are able to credit their work experience as a professional internship if it is related to their studies. Also, a part of full-time students who have not worked for a four-period are working next to their full-time degrees given that scholarships awarded by a specialized state agency are often not sufficient for daily life. Those jobs are not necessarily related to their studies, so that they might not be able to credit their experience.³⁵

Those remaining participate within a professional internship and are expected to negotiate their terms of payment themselves. The University of Applied Sciences views it as a learning process for students to reach agreement on conditions of employment. The binding collective agreements often do not specify the terms of payment for professional internships or the minimum wages set are very low. Some companies do have their own policies regarding the conditions of employment for professional internships.

Despite the relatively unspecific legal situation do most students receive payment comparable to workers with average qualification level entering the labour market. This might be as well the result of the conclusion of a normal labour contract. However, some students do not receive any payment. For instance, a renowned research institutes offers an internship where reputation and access to social networks are more valuable than payment.

³⁵ Students do receive a scholarship for the study period by the state if they do not earn enough money themselves or if their parents are not able to finance a degree program. A specialized state agency is responsible for determining financial support by using the income declarations of the student or the parents. This sort of scholarship is limited up to the age of 27. But also students who have already worked for a four-year period do receive a scholarship irrespective of the age. In this case, the amount received by the state agency is much higher and close to the minimum wage in Austria. The internship is part of the curriculum program and usually does not effect these regulations as long as certain financial thresholds are not exceeded.

c) Learning institutions involved?

The learning institutions involved are the University of Applied Sciences Technikum Wien and the enterprises. The University of Applied Sciences plays a central role, since it is usually responsible for determining adequate placements for its students. The companies do offer a learning environment for the student and assign a person to supervise and evaluate the performance of the trainee.

d) What about the state/the government and its role in your example of work-based learning?

All degree programs are accredited and evaluated by a public commission responsible for quality assurance in the sector of universities of applied sciences. Regulations for accreditation specify as well that full-time degree programs do have to provide for a professional internship with a pre-determined duration. The state plays also an important role in terms of financing of higher education.³⁶

e) Role of professional bodies, students, employees' organizations?

The University of Applied Sciences Technikum Wien has an intense cooperation with partners from the business world. Given that the state support for universities of applied sciences covers only a part of necessary expenses for delivering high quality technical education, such partnership is of great importance for the educational provider. In recent years a sophisticated network has been developed together with major Austrian companies. Employees from the companies are also members of the board of the University of Applied Sciences. Such a network certainly offers opportunities for valuable internship positions.

Important roles for the internship play in particular the respective supervisors from the University Applied Sciences and the respective company. They monitor the progress of the student by using regular progress reports. The process owner of an internship is the academic tutor or ultimately the head of a department who is usually responsible for offering adequate internship positions.

5) Assessment of learning success in your example of work-based learning? How are learning outcomes assessed in this context?

The University of Applied Sciences Technikum Wien provides for a project plan which has to be followed in the course of the internship. This includes in particular a definition of learning outcomes, namely to learn applied techniques, acquire practical experience and solve real-life problems.

Assessment of learning success takes place in the form of regular progress reports which have to be compared to the initial project plan. In addition, conversation between the respective tutors from the educational provider and the company as well as the student should guarantee timely assessment. After the internship the student has to draft another final report and a final assessment of the learning experience takes place. Eventually the student receives a grade, a pass or failed, for the completed internship.

³⁶ Note: In the case of a normal labor contract, the regulations are subject to collective agreements and regulated in a stricter way.

6) Describe the procedure for the planning process within the quality approach in use

The University of Applied Sciences Technikum Wien introduced a quality management system aiming to achieve a continuous improvement of products and services.

‘Aside of a changing style of leadership, the focus of employees will from now on be on quality mindedness. A clear strategy, concrete goals, standardised processes, clear responsibilities and communication of performance contribute to a continual improvement of our products and services.’³⁷ (Technikum Wien 2008)

Professional internships have been recently included into the quality management system. Originally internships were planned in the framework of accreditation processes of degree programs. If necessary, the internships were improved based on the experiences with students. Nowadays, the quality management manual provides information regarding the accreditation process of a degree program including professional internships.

7) What makes the described example to good practice?

(Please refer to effectiveness, sustainability, innovativeness and measurability also as possible criteria for examples of good practice.)

a) Involvement of employers? How are they involved? Are there any stated objectives for work-based learning defined together with learning institutions/learners?

The professional internship is an example of a stakeholder approach focused on creating value added for companies. The trainees should implement knowledge gained during the degree program in a real life work setting. This offers students a good opportunity for integration into the labour market. The professional internship is clearly structured being part of a formal degree course leading to certification. An educational contract between the student and the company ensures transparency by setting the duties of the student and specifying the commitment of the company (to provide a proper internship place according to internship regulations for a defined period). The objectives of this good practice are well stated in the planning phase, whereby the student has an active role in terms of defining the task to be fulfilled and taking on organizational responsibility. The increasing number of students attending degree programs witnesses the effectiveness and sustainability of the stated learning goals.

b) Were any evaluation analyses carried out to find out how the objectives of work-based learning are reached in your example? Are the policy goals/objectives clear and measurable? What are the results of these evaluation analyses?

The major aim of the professional internship is to link theoretical knowledge to real-life settings. Students should gain insights into the practical challenges they face at their prospective workplaces. In order to measure such aim the University of Applied Sciences Technikum Wien carries out every two years a graduate survey. The survey allows determine the suitability of a traineeship taking into account the respective curriculum. It is also counted the number of students who received a job offer by the company where a student attended a traineeship. In addition, the survey should allow count the number of students accepting a job offer. Eventually about 50 % of

³⁷ Quality Management Handbook of the University of Applied Sciences Technikum Vienna 2008. Technikum Wien.

students do get a job offer and again half of them accept a job offer from the company where the professional internship took place.

Another major goal of the University of Applied Sciences Technikum Wien is to provide and measure whether a sufficient number of placements is offered to students. Moreover, the expectations of stakeholders should be fulfilled. Therefore, an initial project plan is set up and fill-in forms for the stakeholders guarantee ultimately for an adequate feedback on the traineeship. The results have been positive evidenced by the growing number of students and placements.

In this sense, the educational provider carries out adequate analyses to assess the objectives of the planning phase of work-based learning. A number of minimum objectives are defined and a systematic evaluation is carried out to identify future needs.

c) Are there any innovative practices of quality assurance to be found in the described example?

The professional internship is part of the overall quality management process model of the University of Applied Sciences Technikum Wien. Hence, professional internships represent processes with process owners that are monitored by the educational provider. The propositions of the EQF model are taken into consideration. The University of Applied Sciences Technikum envisages in particular contribute to the Lisbon-Goals of the European Union. The European Qualification framework acts as a benchmark for study programs concerning transparency of education, compatibility, accreditation of certificates and accreditation of qualifications on the international and national employment market.

Especially the sophisticated stakeholder relationships regarding quality assurance including plans, explicit documentation of the implementation and comprehensive evaluation have to be viewed as an innovative practice.

d) Ensuring process quality: how is it ensured that the planning of the good WBL will be well implemented, evaluated and after feedback improved?

First of all, process quality is ensured by an agreement of three persons: the student, the company tutor and the tutor from the University of Applied Sciences. The students do usually receive a list of companies offering professional internships and a contact person. However, they can suggest a company themselves to the University of Applied Sciences.

The academic tutor has also the responsibility to inform the student about the purpose of professional internships. The quality management handbook with its guidelines acts a a sort of basis being accessible to all stakeholders.

Agreements reached between stakeholders are culminating in deadlines which are signed by the three respective persons. In this regard, the student is normally taking the initiative. Sometimes students are asking whether a certain position is appropriate for the University of Applied Sciences given that it was not on the offered company list.

The process owner for guiding the students is the respective tutor at the University of Applied Sciences. A tutor usually supervises up to eight persons and visits once or twice the companies of the trainees. In the case of placements in foreign countries visits also take place, even though less frequently. Eventually these visits should allow for a direct coordination of the student, company tutor and the tutor from the University of Applied Sciences regarding the aims and conditions of the professional internship. The guidelines for the tutor from the University of Applied Sciences

are specified within the quality management manual of the University of Applied Sciences Technikum Wien. The tutor is especially responsible for the coordination of content of the work of the internship, to define the job requirements in written form and to define the form of the internship report.

The heads of several degree programs and academic tutors of students meet as well twice a term to coordinate issues arising in the course of professional internships. These meetings allow to discuss the achievement of goals set and to take action in terms of improvement.

Upon completion of the professional internship presentations take place at the University of Applied Sciences. The trainees present experiences and results from their placements to colleagues and younger students. During these days younger students do have as well the opportunity to discuss issues related to application and the traineeship itself. Furthermore, trainees can give advice regarding dos and don't. The academic tutors are also invited to these presentations and therefore have the possibility to discuss with students and other academic tutors.

The assessment results (feedback) from students and companies are eventually distributed to process owners. Thereby, future measures related to students, academic tutors and companies can be decided upon. It is up to the process owner to decide whether necessary steps are taken. The lessons learned in carrying out work-based learning can be integrated into a curriculum in the course of reaccreditation of a study programme.

i.) Vocational school TFBS/EKE

System level No	Institutional level Yes
“Learning/didactics” Yes	Assessment/Testing Yes
Diploma Yes	Non-Diploma No
Initial education Yes	Further Education No
Contractual Yes	Non-Contractual No

An example of good practice for the planning of work-based learning at the vocational school for electricians and electronics technicians

1. Short description/summary

At the vocational school for electricians and electronics technicians (= TFBS für EKE) students are educated to become electricians, electronics technicians, communication technicians, IT technicians and computer scientists. Their apprenticeship lasts 3 ½ or 4 years. For nine months a year they work at a company. There they learn the basic skills. For another nine weeks a year they attend vocational school. The task of the vocational school is to impart theoretical knowledge and add practical skills. Apart from that the students get a general education, like political and economic education and calculating.

At the end of the apprenticeship students take a final exam at the “Wirtschaftsförderungsinstitut”, a department of the Austrian Federal Economic Chamber.

2. Describe the background and the surroundings/environment of work-based learning in your example:

a) How is work-based learning in your example carried out? For instance, description of setting, learning methods.

Work-based learning takes place at the company and at the vocational school. Every five years the vocational school for EKE compiles a job analysis. The employers of the apprentices get a questionnaire about their needs. Our school incorporates the requirements of the companies in the framework of the curriculum. Learning methods: The changes of requirements of the business world lead to changes of teaching methods and learning methods. Methods for promoting basic skills are increasingly implemented at the TFBS for EKE.

The students are given a lot of responsibility. They are taught the theoretical basic knowledge in different subjects. Usually they are used to methods where they have a lot of self-responsibility. In the lab they get the instructions from the teachers. The teachers support them, but it's mainly up to the students to find solutions and to put them into practice. Interdisciplinary learning and working helps the students to consolidate their knowledge.

b) Show structural data of your example (number of students involved, duration of programme, number of learning institutions involved, number of workplaces for work-based learning, development of work-based learning in the last years).

About 1.300 students per year attend our vocational school. The number per course varies. During the first year of school attendance the students mostly obtain basic knowledge. When they come for the second time most of them have worked in their companies for more than a year. They have a lot of work experience. From this time on it's possible to give them tasks which involve more self-responsibility. In some companies the students get additional training in training workshops. The instructors keep contact to the students and teachers during the time of the students' vocational school attendance.

In the third and fourth classes the various professional groups work on projects that aim at practising the needs of the business world. Some examples: students create a homepage, plan and implement the cable system at school or produce special technical equipment for the school.

3) What is the purpose of work-based learning in your example?

- a) Please state the aims of your example of work-based learning. Who sets the aims? Where are the aims described? Can the participants vary the extent of their studies at workplaces depending on their willingness?**

The frame for this work-based learning is the curriculum. The detailed aims of work-based learning at the vocational school are set by representatives of the business world (Wirtschaftskammer, Arbeiterkammer), by employers and teachers. There is a continuous dialogue among these representatives. This exchange of ideas guarantees that teachers at school can react quickly on the needs of the business world and on technical modifications and innovations.

Where are the aims described?

The aims can be found in the curriculum, the general framework. You can find more specific description in the so-called "Landeslehrplan". The next step is the school agenda that has to agree with the curriculum, too. This school planning is discussed with representatives of the business world and approved by the "Landesschulinspektor", which is the link between schools and the Tyrolean government.

- b) Is it part of a structural VET program? – Is it carried out freely by the learners?**

Work-based learning and projects are part of a structural VET program and compulsory. The subject "project management" for IT technicians and computer scientists has existed at our school since September 2008.

Before that teachers used to organize and develop projects, the students had to carry out the instructions. The difference of the project management to former projects is that students also have to organize, to administrate, to document and to assess the process. There are platforms for continuous communication with all persons who are involved and with other persons who take interest in the project.

- c) Is there any legal/statutory background for work-based learning?**

The students of our school work in the companies for ten months a year. The frame for this work is regulated in various laws depending on the age of the students. Attending vocational school is compulsory and classified as working time. The skills and theoretical knowledge students have to obtain in the company per year is regulated in the so called "Berufsbild", a kind of job description. The description of the knowledge and skills they have to learn or improve at school can be found in the curriculum.

Students get a salary for their work in the company as well as for their school attendance. Therefore it is compulsory for them to attend classes.

- d) Are the European goals and objectives for VET included in the goals you have set?**

The system for VET is similar in Germany and South Tyrol, which is a part of Italy. Students who are in an apprenticeship to become communication technicians attend the vocational school for EKE in Innsbruck.

4) Roles of different stakeholders

a) Who is delivering work-based learning?

The company is the centre of work-based learning, but at school students get additional technical and general knowledge which helps them to become responsible skilled workers who are able to find practice-oriented solutions at work. Therefore they are able to find jobs of other companies of their choice and to implement other relevant task to their jobs after finishing the training.

b) Characterize the learners: Demographic and educational structure, payment and social situation during work-based learning.

The students come from all parts of Tyrol and from various types of school. Most of the students went to the secondary school and prevocational school. Many attended the technical school of higher education but quitted school after two or three years. There are also students who have a Higher School Certificate from grammar schools, technical schools of higher education or commercial academies. Some students finished another apprenticeship before. Usually students are between 15 and 20 years. As mentioned in 3 c) students get a salary for their work in the company as well as for school attendance.

c) Learning institutions involved?

The learning institutions involved are the companies and the vocational school.

d) What about the state/the government and its role in your example of work-based learning?

The ministry of education provides the frame for work-based learning at the vocational school, the curriculum. The government of Austria and especially the federal state government of Tyrol fund the vocational school.

e) Role of professional bodies, students, employees' organizations?

The Arbeiterkammer, the official representation of the employees, is one of four parties concerned when a contract between a company and an apprentice is signed. The AMS, the job centre, a department of the Arbeiterkammer, provides training companies for people who can't find a company to provide for their training. These apprentices are allowed to attend the vocational school. They get the salary according to the wage agreed on by the job centre. There is a continuous contact between school and AMS.

5) Assessment of learning success in your example of work-based learning? How are learning outcomes assessed in this context?

Anonymous feedback that students give to teachers is an internal instrument of assessing learning success. Students can to reveal weakness, stress advantages and to make suggestions for improvement.

Other ways of assessing are described in the Schulunterrichtsgesetz.

There are written tests and oral examinations by means of finding out what students have learned. The final exam is conducted by the Wirtschaftsförderungsinstitut, an external institution of the Austrian Federal Economic Chamber.

Besides electrician apprentices can produce proof of their expert knowledge at the certification for electricians. The Austrian EIB Center, an enterprise for automation engineering conducts these certifications.

At the end of April 2009 a peer review will take place at the TFBS für EKE. It's a pilot project. Two items will be reviewed: appraisal and environment and technical equipment at school.

6) Describe the procedure for the planning process within the quality approach in use

The planning process is carried out in groups for the various departments, in so-called "Zukunftsforen". Members of these "Zukunftsforen" are the teachers of the school. The members discuss innovations for the training in meetings, adapt the school agenda to technical and general innovations. These discussions guarantee modification, advancement and quality assurance. The Zukunftsforen form the connection between school and business world.

7) What makes the described example to good practise?

Please refer to effectiveness, sustainability, innovativeness and measurability also as possible criteria for examples of good practise).

a) Involvement of employers? How are they involved? Are there any stated objectives for work-based learning defined together with learning institutions/learners?

The job analysis that is mentioned in 2 a) is one important appliance for defining the contents for work-based learning. The results of the job analysis of **all interested** employers are evaluated and put into practice.

Apart from that two important meetings are organized every year. One meeting takes place between headmasters of all vocational schools and the Austrian Federal Economic Chamber, the other meeting is between the headmasters of all vocational schools and the Kammer für Arbeiter und Angestellte, the official representatives of employees.

b) Were any evaluation analyses carried out to find out how the objectives of work-based learning are reached in your example? Are the policy goals/objectives clear and measurable? What are the results of these evaluation analyses?

For reviewing the outcomes the results of the final exams and the certification for electricians are proper devices for measuring the goals.

c) Are there any innovative practices of quality assurance to be found in the described example?

At the end of April 2009 a peer review will take place at the TFBS für EKE. It's a pilot project.

) Ensuring process quality: how is it ensured that the planning of the good WBL will be implemented, evaluated and after feedback improved?

Implementing, evaluating and improving of planned work-based learning is a process which is frequently put into practice. All the instruments that have been mentioned before help modifying and improving work-based learning. At a technical school the requirements and with them the

contents change steadily (e.g. the halflife of latest knowledge for IT technicians come to 1 ½ years), therefore long planning phases are unusual. Planning goes with implementing, evaluating and improving. All persons involved are used to react quickly and the network of all partners is approved and works efficient so that the requirements of the business world are considered.

In the attachment you'll find a specific example for work-based learning at the TFBS für EKE. The planning and a part of the implementation are already set.

Manual for projects

Practical training for measuring the temperature at a rectification construction 001

It is a project in which two schools are taking part, namely the vocational school for process technicians and the vocational school for electricians and electronics technicians. We have developed a device for measuring the temperature automatically during the different steps of fermentation with the 4th class for electronics technicians. In practise you would use programmable controllers which cost several thousand euros. But only a small part of such a programmable controller is used therefore we developed a device which only costs about 700 euro.

The device will be given to the vocational school for process technicians in April 2009. The development for the rectification construction isn't finished. The students for computer scientists are going to develop a special software. For documentation we use the project handbook of **PMA** <http://www.p-m-a.at/content.php> (you can use it for free)

The **software** that is used is called Open Source Software „**OpenProj 1.4**“

OpenProj is an open source project administration, project planning und project management and competes directly against Microsoft Project. Function und design of Microsoft Project are adapted by OpenProj. You can import projects from MS Project and save in MS Project 2003 format, too. You can plan tasks, determine dependences and relations, set and supervise dates record working times, plan costs and maintain resources. For overview you have different diagrams like Gantt-diagrams and detailed charts.

PS.:

Rectification is a process of thermic separation. It's an advancement of distillation or a series of single distillation steps. The advantages of the rectification are a continuous operation. The effect of separation in comparison to the distillation is much higher. The process is energetically better, technically less lavish and more space-saving than a series of single distillations pictures of the construction for rectification of the vocational school for process technicians pictures of the device for measuring the temperature