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**QUALITY ASSURANCE AND PRACTICE-ORIENTED ASSESSMENT IN  
EUROPEAN VOCATIONAL EDUCATION AND TRAINING  
(QUAL-PRAXIS PROJECT)**

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**1 Introducing the Results of the Leonardo da Vinci Project QUAL-PRAXIS**

**1.1 Introduction**

The paper is based on case studies conducted in the partner institutions within the Leonardo da Vinci project 'Quality Assurance and Practice-Oriented Assessment in Vocational Education and Training. The main objective of the QUAL-PRAXIS project, which ran from 2003 to 2006, was to discuss and examine practice-oriented models of assessment from the perspective of different national VET traditions. The countries under discussion were Austria, Estonia, Finland, Germany and Ireland. The project focused on identifying current innovations and future developments in practices and approaches to the assessment of work-related learning in European countries (Grollmann & Stenström 2005, Stenström & Laine 2006 a&b; Grollmann, Luomi-Messerer, Stenström & Tutschner 2007). Particular attention was paid to models and good practices of practice-oriented assessment. The project launched the term practice-oriented assessment, with reference to performance- and competence-based assessment and to authentic assessment in work-related learning.

The levels of education in the case studies varied from upper secondary education to higher education (see Table 1).

Table 1. *Fields and levels of the case studies in the partner countries*

<b>COUNTRY</b>	<b>STUDY PROGRAMME / QUALIFICATION</b>	<b>LEVEL OF EDUCATION</b>	<b>SOURCE / FOCUS OF EXAMPLES</b>
<b>Austria</b>	Social work	Applied higher education	Social work study programmes at an Austrian university of applied sciences (one full-time and one part-time programme at the Fachhochschule Campus, Wien)
<b>Estonia</b>	Health care and IT sector	Applied higher education and initial VET	Applied higher education programmes in nursing at Tallinn and Tartu Medical Schools and IT programmes in applied higher education and in initial VET
<b>Finland</b>	Social welfare and health care (practical nursing), Building Maintenance Technology, Construction	Initial VET	Vocational skills demonstrations and on-the-job learning in initial VET
<b>Germany</b>	Geriatric care	Initial VET	Practical (apprenticeship)

			training as part of education in geriatric care
<b>Ireland</b>	Vocational teacher education	Higher education	Undergraduate-level vocational degree programmes offered by the School of Education Studies, Dublin City University

## 1.2 Practice-oriented assessment

Constructivist learning theory offers an approach to the study of work-related and work-based learning, but it is not enough on its own to explain work-related learning, which can be described with the concepts of reflective, transformative, contextual and situated learning (Lave & Wenger 1991; Mezirow 1991; Poikela 2002, 235). Practice-oriented assessment reflects features of the above-mentioned theories, especially constructivist and contextual learning. The characteristics of practice-oriented assessment can be set against those of the traditional thinking on assessment (cf. Biggs 1994; Black 1999; Eisner 1993; Tynjälä 1999b; Stenström & Laine 2006).

Table 2. *Central features of traditional assessment and practice-oriented assessment (Stenström & Laine 2006; adapted from Tynjälä 1999a)*

<b>Traditional assessment</b>	<b>Practice-oriented assessment</b>
Emphasises quantitative assessment	Emphasises qualitative assessment
Repetitive, emphasises rote learning	Emphasises connectivity between theory and practice and the transformation of knowledge
Artificial assessment settings	Assessment settings that are as authentic as possible
Assessment as separate from the learning process	Assessment as part of the learning process
Assessment by the teacher	Assessment by the teacher, the student and the workplace instructor together and also by other students (peer-assessment)
Focus on outcomes	Focus on the learning process, changes in the student's knowledge and skills, and learning outcomes

It is possible to differentiate traditional from practice-oriented assessment according to their respective conceptions of learning and teaching. One essential difference concerns how the assessment context is understood. In traditional model assessment sessions are arranged after the conclusion of a course as an event separate from the teaching process, while in practice-oriented assessment the assessment is a part of learning process. In addition, assessment settings of traditional assessment are artificial, whereas in practice-oriented assessment the stress is on the authenticity of learning assignments and their assessment. A further difference relates to the question of who are seen as the assessors. In traditional thinking on assessment, the task is performed exclusively by the teacher, while in practice-oriented assessment the teacher typically works in collaboration with other assessors (e.g. the workplace instructor, the student or/and other students).

Practice-oriented assessment has been discussed above within the frameworks and paradigms of assessment. The next sub-section introduces the principles of practice-oriented assessment and quality assurance recognised by the QUAL-PRAXIS project in its analysis of good assessment practices (Stenström & Laine 2006a).

### 1.3 Principles of good practices for practice-oriented assessment and quality assurance

By analysing and discussing the various case studies the research team was able to specify a number of common elements underpinning good practices in the partner countries, although the educational systems and the educational levels targeted were varied. The elements of good practices that emerged were based on the results of the case studies and also on quality criteria such as validity, reliability, objectivity, transparency, equity, and fairness.

The elements are assessment as part of learning, reflection, self-assessment, feedback, authentic context, assessor training, transparent assessment, joint assessment, and multiplicity of methods (Figure 1). The elements are not necessarily mutually exclusive but they may partly overlap or intertwine.

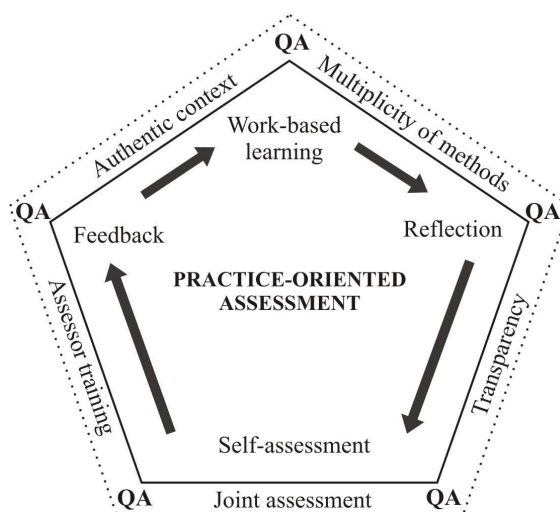


Figure 1. *Elements of good practices for practice-oriented assessment (Stenström & Laine 2006a)*

The above elements can be characterised as representing an activity environment and a learning process. In Figure 1, the inner circle describes the learning process assessed by using practice-oriented methods while the outer circle outlines the activity environment of practice-oriented assessment itself. The environmental factors surrounding the assessment process act as the constituents of quality assurance (QA), thus enhancing the successful implementation of assessment of this type.

### 1.4 Concluding remarks on the QUAL-PRAXIS project

The main findings of the QUAL-PRAXIS project on practice-oriented assessment can be described by utilizing the assessment triangle:

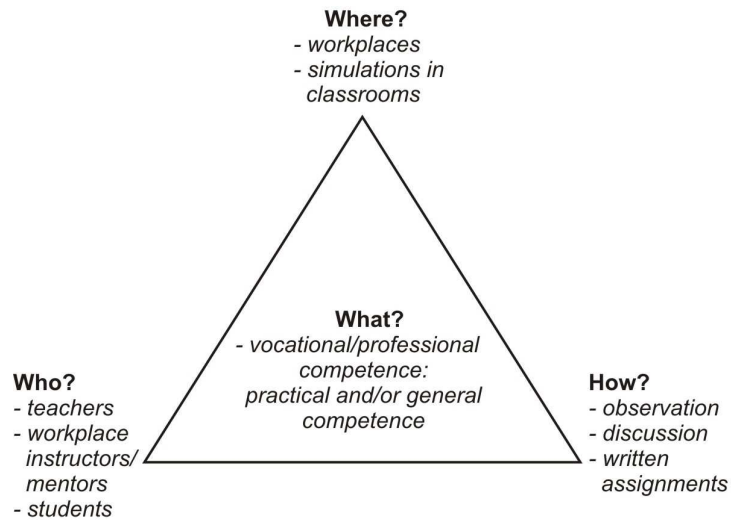


Figure 2. *Assessment triangle: practice-oriented assessment on the basis of the findings of the QUAL-PRAXIS project (Stenström & Laine 2006a)*

As described above, the focus of practice-oriented assessment is vocational competence and the viewpoint of working life is taken into account. Assessment is performed by various assessors (e.g. teachers, workplace instructors, students) in as authentic an assessment context as possible. The most common methods used are observation, discussion and written assignments.

Among measurement experts there is a general consensus that performance assessment, whether authentic or practice-oriented, is a better way to evaluate students and a stronger predictor of vocational skills than paper-and-pencil tests (Wolf 1995, 43). The QUAL-PRAXIS project indicates that practice-oriented assessment is a method of assessing work-related learning that suits a wide range of educational domains. The assessors and methods are highly diversified, therefore the importance of quality assurance in relation to work-related learning and practice-oriented assessment needs especially to be stressed.

## 2 The Finnish Case Study

The following section describes the Finnish case study concerning one current reform in the Finnish VET, namely vocational skills demonstrations. In Finland, the implementation of vocational skills demonstrations was examined in the Health and Social Services Sector and in the Technology and Transport Sector in initial vocational education and training (Stenström, Laine & Kurvonen 2006).

### 2.1 Vocational skills demonstrations in Finnish VET

In order to develop cooperation between initial VET and working life and to assure the quality of vocational education in Finland vocational skills demonstrations were developed. Vocational skills demonstrations aim to ensure that the training meets the requirements of working life and brings the view of the latter to bear on assessment. (Räkköläinen 2005, 21.)

A vocational skills demonstration is a working situation or working process which is designed, implemented and assessed by the education provider in cooperation with representatives of working life. In a vocational skills demonstration the students can, by doing practical assignments, show how successfully they have reached the targets of the initial VET and acquired the skills needed in working life. (Räkköläinen 2005, 21.)

The assessment discussion plays a central role in the vocational skills demonstration process both as a whole and in relation to guiding the growth of students' vocational competence. One of the reasons why assessment discussion is so central is that other kind of tripartite cooperation during on-the-job learning is rather rare. For practical reasons it is not possible for teachers to take part in assessing each and every vocational skills demonstration. The assessment discussion gathers together the viewpoints of the teacher, student and workplace instructor and it aims at arriving at a mutual understanding of the students' skills. (Stenström, Laine & Kurvonen 2006.)

In order to help education providers to plan, implement locally and assess the vocational skills demonstrations, national test material is being developed coordinated by the National Board of Education. The test material is based on the national core curriculum and is to be prepared for each study module of every initial vocational qualification. (Ammattiosaamisen näytöt käyttöön 2006, 9–10.)

## 2.2 Experiences of Practice-Oriented Assessment in Vocational Skills Demonstrations

In Finland vocational skills demonstrations are still at an early stage and it will be some time before the impacts of this assessment innovation become apparent. The focus of vocational skills demonstrations as shown by the adapted assessment triangle (cf. NCR 2001) is vocational competence as a whole. The assessors are teachers, workplace instructors and students, and the methods used are primarily observation and discussion including reflection, self-assessment and feedback. In addition, the authentic context is a very important factor in practice-oriented assessment in vocational skills demonstrations (Figure 3).

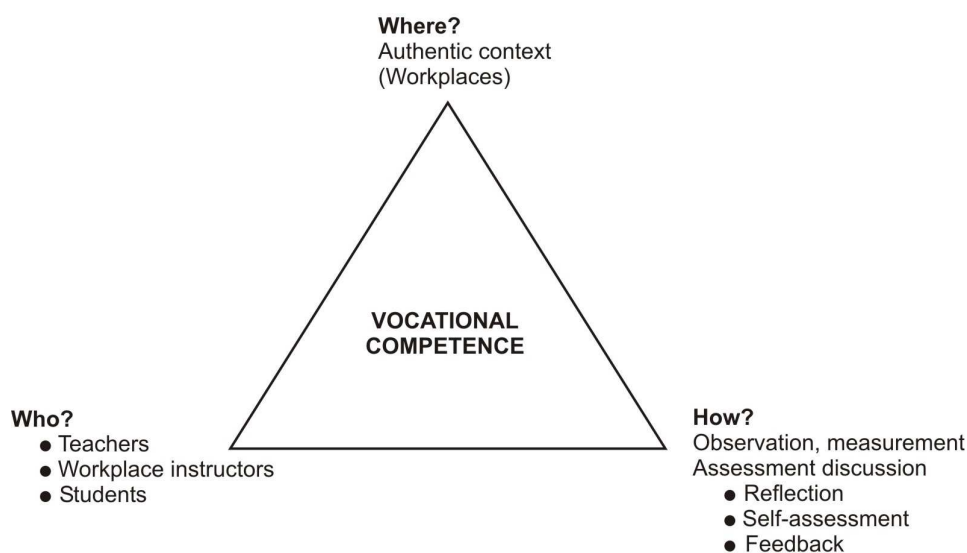


Figure 3. *Practice-oriented assessment in Finnish VET* (Stenström, Laine & Kurvonen 2006)

Furthermore, this study showed that many positive outcomes have emerged from the implementation of vocational skills demonstrations in the two occupational sectors studied. First of all, cooperation between education and working life was reported to have improved. Vocational skills demonstrations have also made all three parties involved – students, teachers and workplace instructors – take their own learning-related duties more seriously and has encouraged them to develop their occupational skills. Students have invested more time and energy in their studies in order to perform well in their vocational skills demonstrations. Vocational skills demonstrations have also helped them to better monitor their own development. Teachers reported intensifying their teaching with the aim of helping students to achieve a good standard in vocational skills demonstrations. Teachers also stated that vocational skills demonstrations had helped them clarify the central issues related to each study module. Because the curricula are extensive, this has proven to be useful. Moreover, workplace instructors, thanks to their guidance duties, have begun to consider their work more thoroughly and find new perspectives on it. They have also started to question some of their working methods. It can be stated that vocational skills demonstrations have guided all three participants in their work and learning.

Several issues should be mentioned that relate to the quality of vocational skills demonstrations. First of all, the vocational skills demonstrations appear able to measure a wide number of the vocational competencies defined in the national core curriculum and needed in working life which are common emphases, core skills common to all fields, command of occupational safety, command of the knowledge that forms the foundation of work, command of work processes and command of working methods, tools and materials (Kinnunen 2005, 70). Use of vocational skills demonstrations also enables attention to be paid to the smaller details which relate to the work in question. Thus it seems that a vocational skills demonstration is a valid instrument for measuring vocational competence (see also *Ammattiosaamisen näytöillä kansallista arviointitietoa* 2006, 13). However, demonstrations alone may not be the most efficient method for gaining a deeper knowledge of a student's vocational skills. This might be better achieved, for example, by observing the student during his/her on-the-job learning period.

There is also the question of reliability of vocational skills demonstrations. Since reliability refers to the consistency of a measure over time, it is closely related to the concepts of comparability and generalizability (Hoepfl 2000, 56). The conditions under which vocational skills demonstrations are implemented differ (see also *Ammattiosaamisen näytöillä kansallista arviointitietoa* 2006, 13). First, workplaces are different and working practices are diverse. Second, it is natural that workplace instructors will vary: instructors have different basic educations and differ in how much training they have as workplace instructors. Moreover, in guiding students their motivation and styles differ. Vocational skills demonstration tasks are also various as are the demands they make on the student. All this variability makes cross-student comparisons difficult and effects the reliability of the assessment. Of course, it can be asked how central it is to make cross-student comparisons and whether it is not of more importance to compare a student's efforts with his or her own previous efforts (see also Svinicki 2004, 27–28). However, as the results of practice-oriented assessment are intended for use in development and evaluation, for example, on the national level, the issue of comparability is clearly a vital one (see also *Ammattiosaamisen näytöillä kansallista arviointitietoa* 2006, 13).

At this stage, one of the most important questions related to the quality of vocational skills demonstrations and thus the quality of VET is whether the resources of working life can be stretched to the point that an adequate number of representatives of working life can be found to take part not only in the assessment of vocational skills demonstrations but also in a sufficient amount of training relating to their duties of assessing and guiding students. It is also important to clarify what other, both practice and theoretically oriented, methods of assessment are needed in the initial VET.

Table 3 summarises the results of the case study concerning practice-oriented assessment in Finnish VET.

Table 3. *Summary of the positive influences and issues to be taken into account in practice-oriented assessment (Stenström, Laine & Kurvonen 2006)*

<b>PRACTICE-ORIENTED ASSESSMENT: VOCATIONAL SKILLS DEMONSTRATIONS</b>	
<b>Positive influences</b>	<b>Issues to be taken into account</b>
<p><b>Assessment</b></p> <ul style="list-style-type: none"> <li>assessment targets and criteria are predefined               <ul style="list-style-type: none"> <li>- national test material</li> </ul> </li> <li>central skills required in a study module are better clarified</li> <li>assessment is more               <ul style="list-style-type: none"> <li>- unified</li> <li>- criteria-based</li> <li>- specific compared to assessment of on-the-job learning</li> </ul> </li> </ul> <p><b>Vocational education institution/teachers</b></p> <ul style="list-style-type: none"> <li>closer cooperation between education and working life</li> <li>redefined curricula</li> <li>education is directed more towards the needs of working life</li> <li>teachers have invested more in their roles as teachers and assessment experts</li> <li>vocational skills demonstrations have guided teachers in their work</li> <li>students' learning and other difficulties has noticed and action taken earlier</li> </ul> <p><b>Students</b></p> <ul style="list-style-type: none"> <li>development of students' vocational skills</li> <li>guiding of students' work</li> <li>possibility for students to better follow their own development</li> <li>students better informed about what is expected of them</li> <li>students have invested more in their learning</li> <li>feedback is given during assessment discussions</li> </ul> <p><b>Working life/workplace instructors</b></p> <ul style="list-style-type: none"> <li>better account taken in schools of needs of</li> </ul>	<p><b>Assessment criteria</b></p> <ul style="list-style-type: none"> <li>criteria rather demanding</li> <li>only minor differences in descriptions between grades/levels of skill</li> <li>one criterion can include many items</li> </ul> <p><b>Assessment targets</b></p> <ul style="list-style-type: none"> <li>How profoundly are vocational skills demonstrations able to describe the skills of the students?</li> </ul> <p><b>Assessors</b></p> <ul style="list-style-type: none"> <li>turnover of assessors</li> <li>assessment training</li> <li>variation in the experience and motivation of workplace instructors/assessors</li> </ul> <p><b>Assessment methods</b></p> <ul style="list-style-type: none"> <li>assessment of vocational skills demonstrations vs. assessment of on-the-job learning               <ul style="list-style-type: none"> <li>o overlapping of these methods of assessment</li> <li>o need for both methods</li> </ul> </li> </ul> <p><b>Vocational skills demonstration tasks</b></p> <ul style="list-style-type: none"> <li>tasks and task demands can vary -&gt; importance of documenting the contents of vocational skills demonstrations</li> <li>opportunities for vocational skills demonstrations missed in the workplace</li> </ul> <p><b>Resources</b></p> <ul style="list-style-type: none"> <li>How far is it possible to stretch the resources of working life to enable proper implementation of vocational skills demonstrations?</li> </ul>

<p>working life</p> <ul style="list-style-type: none"> <li>• workplace instructors have begun to reflect on and question their own working methods</li> <li>• guiding others has helped workplace instructors to find new perspectives on their work</li> <li>• motivation, self-appreciation and the willingness to develop of workplace instructors has increased</li> <li>• vocational skills demonstration is able to capture student achievement during the on-the-job learning period</li> </ul>	
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