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The assessment focuses on vocational competence in the upper secondary level Vocational Qualification in Surface Treatment Technology. Assessment material was collected from vocational skills demonstrations and from supplementary material describing the arrangement of such demonstrations. The results describe grades awarded for vocational skills demonstrations and activities relating to the arrangement of skills demonstrations. The assessment focused on students who had started studying towards the vocational qualification in upper secondary vocational education and training (VET) in 2011 and on all units providing such VET programmes. Assessment material was collected over the entire duration of the programmes through to the end of the 2014 spring term. Information on grades and quantitative data on arrangement of vocational skills demonstrations were supplemented with the self-assessments of VET providers and audit visits. In addition, the assessment involved analysing the vocational skills demonstration plans and the descriptions of skills demonstrations approved by the institutional bodies responsible for demonstrations.

The assessment was planned and carried out by an assessment team made up of Ms Anu Räisänen, Counsellor of Education, and Ms Tarja Frisk, Senior Adviser, (starting from 5/2013) and Ms Paula Kilpeläinen, Senior Adviser, (until 4/2013). In addition, Ms Eveliina Heinäluoma, Sociological Sciences student, and Ms Johanna Holopainen, Education student, participated in the assessment. When conducting audits and analysing materials and results, the assessment team drew on the expertise of teachers working in the field.

Assessment of learning outcomes in vocational education and training is development-oriented by nature, emphasising VET providers' active involvement and the interactive nature of assessment. Materials are collected from the activities of the vocational institutions without any uniform nationwide tests. This development-oriented nature is also reflected in the feedback reports submitted to VET providers, which providers can use to compare their own results with national results. The audited VET providers also received a feedback report on the audit.

Assessment of learning outcomes was based on vocational skills demonstrations, thus focusing on vocational competence. The assessment was based on the criteria specified for education and training in the Qualification Requirements. In other words, the Qualification Requirements functioned as a key starting point for assessment.

Assessment data was collected from all VET providers (N=24), all of which participated in the assessment. The data covered 472 students and 2143 skills demonstrations. The assessment also involved students who receive special support (special needs students). The data covered 372 skills demonstrations performed by special needs students. The data covered 21 skills demonstration plans (87.5%) and 2032 descriptions of skills demonstration. Self-assessment materials were submitted by 24 providers (100%) The assessment team carried out two audits.

The grade most generally attained by students (49%) for their vocational skills demonstration was 'good' (H2); 43 per cent received excellent grades, while 8 per cent received satisfactory grades (T1). All students performed best in key lifelong learning skills (47% received excellent grades) and poorest in terms of knowledge that forms the basis of the work (67% received satisfactory or good grades). Female students received better grades than males. The grades of Swedish-speaking students were higher than those of Finnish-speaking students. Some regional differences were also discovered.

Special needs students had fewer excellent and more satisfactory grades than other students. The most of the skills demonstrations by special needs students (85%) had been performed without using individually adjusted objectives. The grade most generally attained by special needs students (59%) for their vocational skills demonstrations was 'good' (H2); 21 per cent received excellent grades (K3), while 20 per cent received satisfactory grades (T1).

The special characteristics relating to the Vocational Qualification in Surface Treatment Technology became evident in arrangement of skills demonstrations. The results of the assessment indicate that VET programmes emphasise a workplace-oriented approach, although 61% of vocational skills demonstrations were arranged at vocational institutions. 67% of the special needs students' vocational skills demonstrations were arranged at vocational institutions.

No statistically significant connection was found between pedagogical solutions and resources on the one hand and learning outcomes on the other, although the grades awarded for vocational skills demonstrations depended on the assessors. The assessment thus highlighted challenges in determining the criteria for education and interpreting vocational competencies. Related, the assessment also revealed training needs of workplace instructors, in particular in performing criteria-based assessments. The assessment of vocational skills demonstrations indicated that 74% of the demonstrations do meet vocational requirements. The assessment also revealed differences in the quality of skills demonstration plans, as well as in the operations of the institutional body responsible for demonstrations.

Other considerations relating to the reliability of assessment also came to the fore during the course of assessment. In particular, the poor differentiation capacity of the grading scale became

evident. To some extent, the weak link between background variables and learning outcomes may also be indicative of problems with the reliability of assessment.

The assessment highlighted the development needs of both VET providers and units providing upper secondary VET in Surface Treatment Technology, on the one hand, and educational administration, on the other.