

# Synthesis Report Peer Reviews

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## 1. Introduction

The Leonardo Da Vinci-Project „TrainCom“ is aimed at developing a multilingual internet based learning program that enables trainers and teachers in VET to arrange competence oriented learning and teaching processes. The project will be realized in firms belonging to the automotive sector as well as in (professional) schools offering relevant qualifications in primary VET, in Czech Republic, Spain, Great Britain and Germany. In this context the project tries to answer the following core questions:

- How is training conducted in the automotive sector of the partner countries?
  - legislative framework conditions
  - Curricula
  - Learning venues
  - Learning and teaching arrangements
  - Forms of competence evaluation and examination
  - Teachers and trainers
- Is learning outcome orientation of significance in partner countries? If yes: How? How is the approach realized in practical training?
- How can learning outcomes be assessed?
- What are relevant criteria during the realization of that approach? How is training structured? How are learning outcomes described? How are learning outcomes assessed and documented?
- How can teachers and trainers be supported during the arrangement of competence oriented training? How does an internet based learning program have to be designed?

This report summarizes the main results of the peer review and documented on the basis of the individual reports<sup>1</sup> on the peer review those aspects that are essential for the successful implementation of apprenticeships and work placements.

## 2. The Peer Review in VET

Peer Review is a form of external evaluation with the aim of supporting the reviewed educational institution in its quality assurance and quality development efforts. An external group of experts, called Peers, is invited to assess the quality of different fields of the institution, such as the quality of education and training provision of individual departments or of the entire organisation. During the evaluation process, the Peers visit the reviewed institution.

Peers are external but work in a similar environment and have specific professional expertise and knowledge of the evaluated subject. They are independent and "persons of equal standing" with the persons whose performance is being reviewed.

Providers of VET can expect to benefit from a Peer Review by

- obtaining critical yet sympathetic feedback on the quality of their VET provision from colleagues in the field,
- becoming acquainted with an external perspective,
- ascertaining the quality of their provision,
- presenting their strengths and showcasing good practice,

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<sup>1</sup> Roland Löffler. Peer Review Report Audi AG Ingolstadt 27.05.2014. Vienna: oeibf 11.10.2014. Roland Löffler. Peer Review Report Coleg Cambria 05.06.2014. Vienna: oeibf 11.10.2014. Roland Löffler. Peer Review Report Centro de Referencia Nacional de Valladolid 02.10.2014. Vienna: oeibf 12.11.2014. Roland Löffler. Peer Review Report Střední Škola – Centrum Odborné Přípravy (COP) 15.10.2014. Vienna: oeibf 27.11.2014.

- enhancing accountability towards stakeholders,
- detecting blind spots and weaknesses,
- receiving advice and discovering the good practice of Peers,
- engaging in mutual learning with Peers,
- establishing networks and cooperation with other VET providers, and
- obtaining an external evaluation report on the quality of their training and education at a comparatively economical cost.

The general aims of the European Peer Review procedure are

- to promote quality assurance and development,
- to enhance transparency and comparability of quality in VET in Europe through a common European standard, and
- to support equal opportunities.

### 3. Peer Review procedure

#### 3.1 Purpose/targets of the Peer Review

The purpose of the Peer Reviews at the different educational institutions was to learn about good-practice examples of practical training in the automotive sector in Germany, Wales (UK), Spain and the Czech republic. In the project meeting in Nuremberg (December 2013) and Vienna (March 2014), participants were made familiar with the peer review process and the priorities of the following peer reviews were discussed.

#### 3.2 VET Providers

Every partner organisation of the project chose one educational institution as an example for apprenticeship and/or practical training in VET. The peer reviews were organized and prepared by a member of the partner organisations with the help of a manager of the educational institution which was reviewed.

Country	Town	Institution	Peer Coordinator
Germany	Ingolstadt	Audi Training Department	Heiko Weber (f-bb)
Wales	Wrexham	Coleg Cambria	Simon Hughes
Spain	Valladolid	Centro de Referencia Nacional de Valladolid	Inés Sancha (Fundación Tripartita)
Czech Republic	Prague	Střední Škola – Centrum Odborné Přípravy (COP)	Bronislava Samková (bfz)

#### 3.3 Peer Team

The peer teams changed from peer review to peer review. However, most of the partners attended at least two peer reviews

Function	Name	Institution	Peer Reviews
Peer Coordinator*, Transnational Peer	Heiko Weber	f-bb	Ingolstadt*, Wrexham, Prague
Transnational Peer	Claudia Gaylor	f-bb	Ingolstadt, Wrexham, Valladolid, Prague
Peer Review Expert	Roland Löffler, BA	öibf	Ingolstadt, Wrexham, Valladolid, Prague
Peer Coordinator*, Transnational Peer	Ines Sancha	Fundação Tripartita	Ingolstadt, Wrexham, Valladolid*, Prague
Transnational Peer	Rosa Bonet	Fundação Tripartita	Prague
Transnational Peer	Simon Hughes	Coleg Cambria	Ingolstadt, Prague

Peer Coordinator*, Transnational Peer	Alan Bristow	Coleg Cambria	Ingolstadt, Wrexham*
Peer Coordinator*, Transnational Peer	Bronislawa Samkova	bfz	Ingolstadt, Wrexham, Valladolid, Prague*
Evaluation Expert	Furio Bednarz	ECAP	Ingolstadt
Transnational Peer	Matteo Villa	ECAP	Prague
Transnational Peer	Carlos Herreros	Centro de Referencia Nacional de Valladolid	Ingolstadt

### 3.4 Methods for collecting data and sources

Presentations of the national systems of vocational education and training and quality assurance during the partner meetings in Nuremberg and Vienna, visit to the educational institutions, presentation of the educational institutions, of curricula, assessment procedures, visit to the workshops, discussions with trainers and trainees.. The project consortium reflected on the main findings along the quality areas outlined by öibf.

## 4. Assessment of Quality Areas

In the following chapter the results of the peer review are summarized in generalized manner and illustrated by selected examples. The findings are presented according to the “14 European Quality Areas”, a specification of quality areas by means of criteria, examples of indicators and sources of evidence. This quality areas have been developed within the framework of a series of Leonardo da Vinci projects to use the peer review process in European vocational training. In this report only those quality areas are discussed which were in the focus of the four peer reviews.

### 4.1 Quality Area 1: Curricula

#### Criterion 1: Institutional Curricula

To ensure high-quality vocational training, it is necessary to have a training plan that meets the following requirements:

- The determines the core educational goals. These goals are transparent to both teachers and students.
- Both teachers and students feel that the timeframe of the learning goals of the school curriculum is feasible: The programme can be completed successfully within the planned time.
- The educational goals of the school curriculum give teachers enough space to create a personal model of learning and teaching processes.
- The curriculum ensures the development of professional skills and has clear links with current professional practice.
- Curricula are regularly revised in order to adapt them to changes in professional practice and in society at large.

In Germany e.g. curricula are set by the local authorities, but Audi and other companies with influence can participate at creating of the curricula. This leads to better employability of the trainees, it's also important for the companies, because the trainees have knowledge and skills, which companies demand. The professional regulations provide a frame, they are interpreted in a flexible way, and influenced by the shifting to learning outcomes and unitisation.

Criterion 2: Organisational Framework

The organisational framework of teaching should support the implementation of educational goals. The requirements for the lessons (time, assignment of teaching contents, etc.) should be appropriate to realise the learning goals and the pedagogical core ideas and values. The teaching programmes should fulfil the formal requirements regarding duration. To promote particular interests and talents the educational institution should provide special options for students (alternative subjects, remedial teaching, etc.).

In the apprenticeship programme of Audi (Germany) there is opportunity for flexibility to suit specific student needs and there is a good balance between theory and practical application. It provides a structured programme of learning showing progression and development of the students involved. Initial psychometric testing and skills analysis is used to identify the most appropriate path for the apprentices to take to utilise their individual skills to best effect. Successful completion of each year of the programme is essential for progression onto the next phase.

Criterion 3: Content of curricula

The curricula should have breadth and balance (broad knowledge versus in-depth knowledge) and should be justifiable in terms of both national curriculum and own institutional arrangements. The curricula should reflect the state of the art in the professional field.

Curricula should be in line with students' qualifications: In relation to the structure and the conduction of the teaching programme, consideration has to be given to the differences between participants with respect to their educational needs and possibilities (tailored programmes, individual study programmes).

The final qualifications have to be translated adequately into learning goals for the teaching programme or its components. The contents of the programme should offer students the opportunity to obtain the final qualifications.

The content taught in one part of the programme should be well integrated with other parts of the programme. The teaching programmes should show appropriate sequences and facilitate coherent progression over years. The content of the teaching programme should also relate to previous and further education.

To take the Curriculum of the Czech Střední Škola – Centrum Odborné Přípravy (COP) in Prague as an example, the Curriculum for Car Mechanics is very elaborated and well-balanced. It contains several professional subjects (e.g. Manufacturing Technology, engineering, Technical documentation, Technology repairs, electrical engineering, Repairs and diagnostics, Automobile, Driving), theoretical subjects (e.g. mathematics, physics, chemistry, informatics, economics, biology and ecology). The education allows qualified exercise activities during repair of motor and trailers. The acquired skills will enable graduates to succeed in manufacturing, repair shops, garages, service stations (STL) measurement stations emissions (SME) etc., during the assembly and dismantling, providing repair, maintenance, adjustment and replacement of parts and functional parts (or. with slight modification) function checks carried out after repair and adjustment, service diagnostic equipment for fault detection and control technical condition of vehicles, filling the technical documentation of field records performed maintenance and repair, provision of necessary material, spare parts, etc. According profiling training may create a vocational competencies assumptions for the repair of automobiles, trucks, trailers and semi-trailers or motorcycles. Part of education is preparation for driving on personal and truck. They can be applied as truck drivers.

Criterion 4: Promotion of key qualifications

The curricula should provide for the promotion of key qualifications and soft skills. These include e.g. learning to learn, social competences, communication skills, (self-)management skills, problem-solving competences. Special attention has also to be given to the attainment of general key competences like literacy, basic mathematics, computer literacy etc.

At Střední Škola – Centrum Odborné Přípravy (COP) in Prague, the curriculum provides the necessary key qualifications offering subjects of general education (Czech language and literature, English, German, civic science), physical education, personnel and material security education and vocational training in workshops.

Criterion 5: Practical Training

The curriculum should include external practical training. There has to be a strong cohesion between institutional teaching and practical training. The institution should verify whether the content of practical training corresponds to the curriculum requirements and whether the supervision of the company/organisation is sufficient.

Within the curricula of all educational institutions visited during the peer reviews practical training is an integrative part. Vocational training usually is organized in teaching groups.

The general objectives are (in regard to the automotive sector)

- to explain to pupils a sense of respect for the rules of safety and environmental protection environment.
- To teach students self-selecting preparation for hand tools, safe procedure materials processing, repair and assembly of vehicles and their parts.
- To teach students to work with technical materials and introduce them to the possibilities of their application, select processing methods.
- To familiarize students with the structures of individual vehicles and to teach them to troubleshoot.
- Explain the function of the main parts of the vehicle.
- To teach pupils to explore the functions and characteristics of each system fuel units.
- To teach students to diagnose faults on vehicles, propulsion units and systems control and eliminate defects.

Criterion 6: Final qualification of the study programme

To provide employability of graduates the final qualifications of the programme have to correspond both to the requirements for a degree in the relevant domain in Europa and to the professional profiles and/or professional competences demanded by the companies.

In Germany and Austria, the concordance of training regulations with the requirements of the economy in the different professions is ensured by the strong involvement of the social partners in the (further) development of training regulations.

In the UK, the vocational system has a Qualification and Credit Framework (QCF) which is the framework for creating and accrediting qualifications in England, Wales and Northern Ireland. It allows achievements to be recognised and recorded through the awards of credits and qualifications.

In Spain, the backbone of the new VET is the National Catalogue of Professional Qualifications, consisting of the qualifications identified in the productive system and the training associated with them which is organized in vocational modules. The professional

qualifications are arranged in 26 professional branches and 5 levels of qualification, taking into account UE criteria. Each qualification includes VET learning contents organized in modules which comprise the Modular Catalogue of Vocational Education and Training. The Spanish National Institute of Qualifications, known in Spanish as INCUAL, is responsible for defining, drawing up and updating the CNCP and the corresponding Modular Catalogue of VET.

## 4.2 Quality Area 2: Learning and Teaching.

### Criterion 1: Teaching Content

Teaching contents should implement educational goals and follow the curricula. The teaching material used has to be up-to-date, adequate and should support a variety of learning methods.

As a company in a specific trade, with well-established methods of work, Audi (as an example of best-practice apprenticeship in Germany) has a very deep and smart knowledge of their training demands and can fulfil them within themselves. The national curriculum provides support for their activity, having to comply with certain learning contents but with enough flexibility to tailor the programmes to their needs; on the other hand, the application of the competences learned is quite straightforward, favouring all this adequacy of curricula content, the progress from easy to more complex tasks, from the training centre to the assembly line.

### Criterion 2: Lesson planning

In regard to lesson planning, the learning and teaching processes have to be based on institutional mission statements, values and curriculum requirements. Lesson plans should be transparent and can be shared in the institution. The adequacy and efficacy of lesson plans should be regularly reviewed.

With Audi, the training plan responds to a curriculum model set by the government for the state. It includes specific adaptations for Audi's training needs or similar manufacturing companies, providing employment opportunities at the end of the training period. It covers three different dimensions of training: Learning of general- theoretical knowledge at school, theoretical and practical learning applied to the job, ork based learning at Audi's training centre and at the workplace.

### Criterion 3: Creating the learning and teaching processes

The teaching methods (in the classroom, training workshop, by e-learning) should be effective and cohesive, fit in with the chosen point of departure and provide room for the independence of students. The teachers/trainers have to make sure that students understand the teaching aims and intentions. Teachers are meant to succeed in explaining complex circumstances using adequate language and should be able to arouse the interest of students in the teaching content. The ideal teaching arrangement allows and supports collaboration by the students. Those should be made aware that they have a personal responsibility for learning and its success. The teaching arrangement should encourage students to combine subject theory and practice (and own experience).



Nearly all institutions visited fulfilled the requirements described. The teaching institutions reviewed in Germany, Wales and Spain focus on modern teaching methods, the action teaching method is well applied in the training. There is given a fix structure of the learning. Trainees start with simple tasks and proceed with complex tasks. There is a clear visibility of self-contained learning activity supported by a protective training environment (positive learning culture), a stimulating learning infrastructure (comprehensive work tasks, test models, simulations, e-learning) and professional trainers (support during work task, feedback and reflection after completion). Trainers organize students' activities based on principles of self-responsibility, self-control, project management, problem solving and productivity analysis approach. The students are involved in their own learning from the beginning. They engage in leadership roles in the management and control of the various projects. They record the results of their activity, analyze results, successes and mistakes. The activities appear to be organized as if oriented around a purpose and an outcome, including complex learning dimensions of knowledge and practical skills

Peer learning and cooperative learning settings are used from the start of the apprenticeship that promotes the development of team skills, communication skills, leadership and management skills through working toward a common goal (which is getting more complex as the apprenticeship progresses).

#### Criterion 5: Guidance and counselling of students.

In all institutions visited there was evidence of coherence between the institutional goals, learning and teaching. There was an excellent balance of students using their own initiative and guidance and support from teacher's trainers and mentors. Students are allowed to make mistakes {and learn from this process} provided there were no safety issues involved. This involvement of empowerment is a positive aspect and encourages the students to think for themselves, either on an individual basic or as part of their team working skills. Evaluation and feedback is incorporated into the students learning and this is when they can be encouraged to reflect on the positive and any negative aspects of their work and how this can be addressed in future tasks. The students observed were all highly motivated and very clear as to the procedures and processes they were undertaking and also clear of their specific objectives to achieve in both the short and long term.

### 4.3 Quality Area 3: Assessment

#### Criterion 1: Assessment concept

To ensure a high standard of education and training, the institution should adhere to a coherent testing and assessment concept. The teaching process should also include a formative performance assessment (i.e. a situational analysis of the individual student in his/her learning development, which has no consequences for the marks).

In Germany, assessment follows regulations set by the law, but on top of that assessment at Audi schedules formative assessments in between to monitor intermediate results, give the learner the chance to follow his/her progress and to keep the trainer in track of the apprentices' progress.

In Coleg Cambria (Wales), each unit of the curriculum has a credit value and level. Candidates evidence is portfolio based. ePortfolio's are now becoming the most common method of storing candidates portfolio's with candidates, assessors, internal and external verifiers all having access to portfolio. The assessor may use a variety of assessment method such as direct observation, witness testimony, examination of finishes pieces of

work, examination of written material prepared by the candidate, professional discussion, personal statement, oral questioning, assignments or projects, and audio/video recordings. There is a rigorous assessment system in place to ensure fair and consistent monitoring of candidates. There is flexibility of learning and assessment to meet individual requirements and opportunities of progression by recognition of prior learning (RPL). The standards are national and are created with the endorsement of employers.

Also in Spain, the Competent unit (UC) is described through professional performances which set up the expected behaviour of one person in terms of outcomes or results of the activities performed. Every professional performance (RP) is assessable through a set of performance criteria (CR) which express the acceptable level of one professional performance to fit the productive organisations' targets. They are a reference guide for the assessment of the professional competence. Every competence unit is linked to a learning module . which describes the necessary learning to acquire that competence unit. The Modular Catalogue of VET consists of all the learning modules. Each module is associated with one of the competence units which form a professional qualification. The Modular Catalogue provides a common reference for the integration of the Vocational Education and Training offer in order to allow the capitalization of learning and the promotion of lifelong learning. The learning specifications are expressed as capacities along with their related assessment criteria. The capacities are the expression of the learning outcomes. Every Capacity has a set of assessment criteria which delimit the scope and level of one capacity as well as the context in which that capacity is going to be assessed.

The competence structure not only serves as a reference for the design of training, but also facilitates the evaluation and accreditation of work experience and non-formal or informal learning. In this sense, a common procedure for the evaluation and accreditation of professional skills acquired through work experience or non-formal learning was approved in 2009. This procedure consists of two parts: the first part is for information and guidance to the candidate, in which a skills dossier is prepared and an interview is conducted to assess the candidate's professional experience and skills; and the second part is the evaluation and demonstration of those skills. Professional competence advisors and evaluators are used for each of these stages. At the end of the procedure the candidate is awarded with the accreditation of the skill (UC) or qualification of the CNCP. As a supporting tool in order to ensure homogeneity and reliability, several evidence guides of competences and self-assessment questionnaires have been developed to help candidates, as well as assessors and evaluators along this procedure for evaluation and accreditation.

In the Stredny Skola (Prague), for every subject the assessment concept and the criteria are defined in the curriculum. The Topic Manufacturing Technology may serve as an example:

"In the evaluation, they place emphasis on:

- depth understanding of the subject matter and the ability to apply knowledge in practice;
- pupils' independence in learning about materials and design using appropriate technology with respect to economic, environmental and safety aspects;
- accuracy and correctness of expression using the terminology.

Students will be evaluated on the basis of oral and written tests, at semi-annual classification will take into account the overall approach to teaching the student to process and fulfillment of study obligations.

Evaluation will be in accordance with the classification procedure, which is part of the school rules.

Benefits subject to the development of key competencies and cross-cutting themes:

- develops technical thinking pupils;  
teaches students to express themselves professionally;
- gives students the chance to defend, formulate and develop their ideas, opinions and attitudes;

- leads students accountable for their own work;
- encourage students' interest in new technologies;
- leads to the adoption of the principles of sound and responsible approach to the environment;
- gives the opportunity for pupils to learn effectively, to learn and to use the experience;
- teach students to independently search of information sources and application of information found on specific issues."

## Criterion 2: Function of assessment in learning and teaching processes

The teaching process should include systematic success control, which aims to ensure differentiated insights into the students' abilities. Students should receive well-balanced feedback on their strengths and weaknesses at regular intervals. Teachers discuss the main errors with their students and help them to improve.

With Audi, the students worked to a structured programme of learning and the assessment of theory and practical aspects was ongoing. There was an excellent support mechanism in place for all students and if any student was shown to be falling behind a process was available to provide additional support to focus on any areas of weakness. The students were clear about the process of their development and tutorial support was provided on an individual and group basis.

With Coleg Cambria, according to the modular system of units within the training program, assessments are taken all the way through the program. For every unit a consultation sheet provides information on the competences to be assessed. The assessment results are documented and accessible to the student. So the student has evidence about the competences achieved (resp. the extent to which the qualification was obtained) and therefore has full information of his or her progress in the learning and teaching progress. Students also receive well-balanced feedback on their strengths and weaknesses from their tutors and assessors and regular intervals.

In the Centro de Referencia Nacional de Valladolid, assessment, a responsibility of the education centre, is performed by vocational modules, and is conducted with reference to the objectives and evaluation criteria for each of the modules. As for the evaluation of the workplace training module, it will have to be in collaboration with the school tutor and the company tutor appointed by the corresponding work centre for the period of stay of the student. This vocational module will be graded as pass or fail. If the student can prove one year experience in a full-time job related to the respective professional studies, he/she may gain total or partial exemption from workplace training.

Students can have at least 4 opportunities to pass each of the modules, and their marking will be numeric, between one and ten, without decimals. To pass the whole VET cycle it will be required to overcome each of the modules (equal to or greater than five points). The final score of the training cycle will be the arithmetic mean expressed with two decimal places. The evaluation during the learning process must be carried out through a combination of different methods and tools, which may include, among others, the assessment of assignments, activities and tests during the training process.

At the end of each vocational module there will take place a final assessment, theoretical and practical, that will be referred to the set of skills, evaluation criteria and content associated with that module. When the module is structured in training units, the assessment should let identify the score on each Unit. Besides, a minimum attendance of at least 75 percent of the total hours is required to allow trainees take the final assessment of a vocational module.

In any case, methods and assessment tools have to be adapted to the type of knowledge, skills and abilities listed in the capacities and evaluation criteria, and to ensure an objective, reliable and valid assessment. Each assessment instrument shall be accompanied by the corresponding correction and scoring system in which it will be detailed, clearly and unequivocally, the measurement criteria to assess the learning outcomes achieved by the students. The results of the assessment are expressed by marks from 0 to 10. For a trainee to pass a vocational module a minimum score of 5 must be obtained in the final assessment test thereof and, if applicable, in each and every one of the units that configure training. There are only two opportunities to pass each module.

### Criterion 3: Assignment of marks

The assessment and rating procedures have to be transparent to the students. The students should have information about the assessment criteria used by the teachers. The teachers should investigate whether the students perceive their performance assessment as fair and adequate. Negative feedback leads to an improvement of the assessment procedure.

In Coleg Cambria e.g. the assessment and rating procedures are transparent to the students, consultation papers and trackers are open to them as well as the curricula which provide a detailed compilation of competences to be achieved and learning outcomes for each unit. They also include a list of comments and feedback for each assessment. Assessor's should comment and give feedback each time they observe a learner or meet with a learner to review evidence. Therefore each time an observation or review of evidence takes place the assessor should enter the date and the evidence number, and make appropriate comments and feedback such as

1. A description of the various activities being carried out by the learner for each unit.
2. How the learner has met the Learning Outcomes for each unit.
3. Questions that you have asked, particularly to cover Evidence Requirements, not demonstrated through performance.
4. Questions you have asked to ascertain Essential Knowledge.
5. Issues arising from assessment.
6. Identification of good or poor performance.
7. Any action required to further develop the learners knowledge and skills.
8. Constructive feedback to the learner.

### Criterion 4: Final examination

The educational institutions/companies should have a transparent final examination system and an information system that warns the students about a possible failure at the final examination. Failures (particularly at the final examination) should be analysed to ascertain possible reasons and adequate improvement measures.

With Audi, Final examination is divided into two parts. First part of the examination takes part in the 2nd school year, second part of the examination takes part at the end of training programme. Assessment is oriented at self-contained activity – information, planning, decision making, doing, controlling and evaluation. Dividing of the assessment into two parts is positive for the continuous learning of the trainees.

In Coleg Cambria and the Centro de Referencia Nacional de Valladolid assessment is held continuously throughout the whole educational programme. Students can obtain their current status in relation to the learning objectives based on the documentation of performance assessments. This ensures that a continuous learning progress is guaranteed. As a result, students are well prepared for the requirements of the final examinations.

#### 4.4 Quality Area 4: Learning results and outcomes

##### Criterion 1: Reporting students' learning results

According to the reporting of students' learning results one can both use qualitative and quantitative indicators. In regard to qualitative indicators the institution should measure and assure students' learning results by using adequate instruments and procedures at periodic intervals. One (possible) indicator could point out whether the majority of students fulfil the determined learning goals. Also the comparison of the learning results of the own institution with learning results from other comparable institutions. Additionally the institutions could measure quantitatively the distribution of qualified students divided by the levels of achievement.

As for the reviewed institutions, e.g. Audi has a profound and structured assessment system and assessment criteria. On its own initiative the company defines learning outcomes to assess apprentices in between the two examinations. Learning results are measured and assessed at regular intervals. Audi has well documented the student progress. Assessment is deeply integrated in the system, both as a process and as result, as an individual and as a team. Their different procedures help them to identify weaknesses and students receive clear and transparent feedback, for example, the training on the final Chamber assessment which consists also of an intermediate evaluation.

Within the curricula of Coleg Cambria, for each unit the level, the credit values, the route of unit (knowledge, skills, competence) as well as the rationale is defined (e.g. VCQ Assessment Record for IMIAL Level 2 Diploma in Light Vehicle Maintenance and Repair Competence (QCF) I.D500/9819/6, UNIT REF: G3C, COMPETENCY IN SUPPORTING JOB ROLES IN THE AUTOMOTIVE WORK ENVIRONMENT: This unit will help the learner develop competency in order to keep good working relationships with all colleagues and customers in the automotive work environment by using effective communication and support. The record also includes the learning outcomes to be achieved.

##### Criterion 2: Educational output and career performance

The educational output and career performance can be monitored by a number of qualitative and quantitative indicators (Access to and use of pertinent data on educational output, information about students' career performance, open discussions about negative feedback, educational output (The teaching programmes achieve an internal educational output that meets the institutional expectations), graduation rates (Graduation rates meet the institutional expectations, duration of study (The teaching programmes achieve an average duration of study for earning a diploma that meets the institutional expectations), drop-out rates of students, transition to working life..

The Training centre of Audi has well qualified trainees. As one of the trainees said: "The Audi Training centre gives the best education in Ingolstadt." Audi chooses the best trainees for their learning programmes, also therefore have the learning results and outcomes so high quality. Furthermore, more than 90% of the apprentices stay with Audi after passing the final examination.

## 4.5 Quality Area 5: Social environment, access and diversity

### Criterion 1: Social Environment

The evaluation of the social environment of a training institution includes the regional economic situation, the characteristics of the population in regard to educational attainment, income, cultural and social capital as well as the existence of special vulnerable groups (i.e. migrants, unemployed, etc.)

With Audi, training strategies take into account also social and personal skills like team work, presentation skills, problem solving, building self-confidence and autonomy, a sort of empowerment of the apprentices for future challenges in real work contexts. In this sense, it reveals their strategic vision. Besides, there are other learning opportunities along the professional career.

### Criterion 2: Access and diversity; Admission policies and procedures

An best-practice accessibility policy ensures diversity of the student body in terms of background and needs and is implemented through recruitment efforts, provision of information, adequate assessment and placement. Therefore, the admission procedure has to be appropriate for a diverse spectrum of applicants while ensuring that there is a match between the students' requirements and the institutional profile and educational programmes.

At Audi, 25 % of the trainees at the Training centre are women, that is very high rate for a technical training centre. The Training centre has quite multicultural environment thank to 17 production locations in abroad. Special privileges of the Audi's training centre, which are not easily transferable to other vocational training centres are:

- the ability to recruit among the best students due to the company independence in its training activity and its prestige.
- the provision of a team of trainers with mid and long term objectives (beyond the period of students training). This allows the organization of learning processes well experienced and learning outcomes orientation.

Being such a big and powerful company, Audi is in the position to profit from the best students (meaning best marks, highest motivation), and putting them in an enrichment environment. It makes you wonder how it would work and which the challenges would be for less advantaged groups. Nevertheless, they try to have a well balance pool of trainees caring for gender mainstreaming or migration status

At the Strendy Skola (Prague), there is a specific policy of the school in regard to pupils with special educational needs pupils with disabilities, physical handicap or social disadvantage<sup>2</sup>. For the education of these students can be developed individual education plans. Individual learning needs of pupils who have been diagnosed, are taken into account teachers of individual subjects. Exceptionally gifted pupils can transfer to an upper grade without passing the previous year, under the conditions stipulated by current legislation.

<sup>2</sup> Disability is mental, physical, visual or hearing impairments, speech impediments, multi handicaps, autism and learning disabilities or behavior. Health disadvantage is weakening health, long-term disease or modest health disorders leading to learning and behavioral problems that require consideration in education.

Social disadvantage

a) family with low socio-cultural status, threats to social pathological phenomena,

b) compulsory institutional care or protective upbringing or

c) the status of recognized refugees, persons enjoying subsidiary protection, and the party granting the international protection in the Czech Republic under a special legal regulation.

Special educational needs of children, pupils and students are finding school counseling facility.

#### 4.6 Quality Area 7: Institutional ethos and strategic planning

##### Criterion 1: Development plan

To provide high quality VET it is necessary to have a development plan where the institution has determined its strategy, a mission statement, its values and priorities. The institution should define targets and adequate measures, how to put into practice and measure the development plan (with its key components such as the mission statement). The staff should identify with the tasks and core ideas to a high level. Furthermore, goals and core ideas should be used to reflect fundamental principles for evaluation and development purposes. The development plan of the Audi Training centre e.g. emphasizes the students' responsibility on their learning: personal work for their own future development, the search for learning opportunities with a troubleshooting methodology, the role of trainers as professional councillors and the organization of training by the "step by step" concept including assessment along the different phases: "Information / Planning / Decision making / Doing / Controlling / Evaluation".

#### 4.7 Quality Area 8: Infrastructure and financial resources

##### Criterion 1: Infrastructure and facility quality

For a successful VET a well-formed infrastructure and facility quality is very helpful. This can be evaluated by the following indicators:

- Sufficiency: The accommodation and material facilities are sufficient to carry out adequate education.
- Design of classrooms and training workshops: The quality of the classrooms, training workshops and inventory is sufficient to achieve the learning goals and final qualifications.
- Access: Students have access to the spatial and material resources of the VET provider/institution (photocopiers, library, etc.) in order to work efficiently and independently.
- Outdoor places: The institution possesses user-friendly outdoor places and recreation facilities, which ensure pleasant surroundings outside the classroom areas. The arrangement of these infrastructures fosters social and communication opportunities.
- Health and safety: The arrangement of the school infrastructure (outdoor places, energy use, classroom facilities, training workshop facilities) ensures health and safety. Furthermore, it accounts for ecological concerns.

Quantitative indicators for the evaluation of infrastructure are:

- Physical resources/student ratio
- Computer/student ratio

Audi enjoys a wealthy infrastructure and financial resources, but it is also remarkable how they have managed to make the training a sort of sustainable activity, selling some of the products manufactured during training, which has not only economic benefices for the company but also personal and social ones for the apprentices, helping them to take responsibility for their final work. But also the Coleg Cambria and the CRN Valladolid provide a state-of-the-art infrastructure and premises which supports education and training in a comfortable environment.

#### 4.8 Quality Area 9: Staff allocation, recruitment and development

##### Criterion 1: Personnel structure and qualifications

The teaching staff of an educational institution is a key factor in providing high-quality vocational training. To monitor the personnel structure and qualifications the institution can use several indicators.

Qualitative indicators:

- Distribution of staff functions: The distribution of staff functions and tasks ensures the realisation of the educational goals and tasks of the institution
- Description of tasks and responsibilities: The various tasks, responsibilities and decision-making competences are clearly described and transparent to all institutional members.
- Competences: The staffing levels are sufficient to ensure that the teaching programme is provided to the required standards. The staff is sufficiently qualified to ensure that the goals regarding contents, didactics and the organisation of the teaching programme are achieved.

Quantitative indicators:

- Teacher/students ratio
- Other personnel/students ratio
- Gender impact analysis of staff

At Audi's, trainers, tutors, coaches etc., are part of the company and have a clear knowledge of company culture and work processes, as most of them are recruited from inside, based on their personal qualities already tested in the shop floor, as well other formal factors. They share similar standards and teaching principles, working also individually and as a team. Their role is more of coaching than teaching, but it is not clear to me if guidance is part of their tasks or falls into the school scope.

As part of the company trainers' training they have some courses regarding Audi's orientation to competences, learning outcomes and how to implement them in the regular training.

#### 4.9 Quality Area 14: Quality management and evaluation

##### Criterion 1: Satisfaction of the students and stakeholders

To keep on track assuring and improving quality the institutions should gather relevant information about the satisfaction of the students and key stakeholders (former students, parents, recipients like companies, universities) regularly and systematically (feedback culture). The information should be collected and used for reflecting on the institutional programmes, goals and performances.

At the institutes reviewed the students seem to feel very comfortable with the teaching methods, are very motivated, but (in the case auf Audi) are a bit frustrated by obligations engendered by regulations (written reporting, traditional way of examining theoretical knowledge).

##### Criterion 2: Systematic quality management system

In regard to quality management the institutions should run a coherent, holistic and systematic quality assurance system that forms an integral part of the institution's policy cycle and organisation. Quality goals, responsibilities and liabilities should be defined. Management should work systematically on implementing the formulated quality goals. Relevant



stakeholders should be involved in assessing the quality of the education provided and the stakeholders' wishes should be included when establishing the quality goals

The Coleg Cambria, as an example of best practice, runs a coherent, holistic and systematic quality assurance system that forms an integrational part of the institution's policy. The assessments undergo a quality assurance procedure including internal and external verifiers (cp. City & Guilds, Level 3 & 4 Awards & Certificates in Assessment and Quality Assurance. Qualification handbook for centres).

The CRN takes great efforts to improve the quality of all areas of VET. One of the current issues is to monitor course content in order to increase the quality of courses based on the National Professional Qualifications System certificates. Establishing Quality Management systems requires obtaining evidences to verify the delivery of the contents established on by NPSS certification system. Therefore the CRN introduced control procedures in order to obtain documentary evidence of practices linked to each and every part of the program. It provides internal guidelines for the trainers on how to proceed in training monitoring and working documents to use and has developed several documents such as Contents programming form, a training practice identification form, a training practice work form and a theoretical contents form.

The Contents programming form offers a time schedule for each of the training modules. A pre-elaborated form is given to trainers with the information about training modules according to their contract. The trainers complete the document giving details about time scheduling. In the Contents programming form the trainer records the instruction delivered in each module in regard to resources used, teaching aids, documents given to the learner, activities, theoretical sessions, practices, evaluation test and time used for each module. The Training practice identification form is used to plan each practice performance in regard to content, time, means, results to verify and assessment criteria. Finally, an expert from the training center verifies the activities' idoneity.

With the help of the Training practice work form the CRN can collect evidence of the practice's execution: Each learner sketches out the steps of each practice, trainers assess each learner's activity, the learner signs after he's evaluated. Then trainer and a coordinator from the training center sign the form. The object of this procedure is to verify the adequacy of the contents acquired to the courses specifications. The evaluation is done by checking the learning process results. Furthermore the form is the evidence of the learner's abilities/competences.

The working approach of the CRN includes several means of quality assurance:

- Internal continuous training: Every year the center's management team should be trained and updated in regard to fix and clear concepts and methods, assign responsibilities.
- Training the trainers: At the beginning of each course the trainers pass through an individual or collective training session.
- Documents control and distribution: Documents are posted in the cloud for the trainers to share. Trainers post each form filled by learners to be inspected by the coordinator. The trainers also share the work documents with trainees in the cloud
- Monitoring meetings: The coordinators verify daily the course's progress. Weekly follow up meetings are held with other trainers in related areas.

The next goals in regard to quality managements are

- developing a computer database of defined practices. There the CRN wants to complete the definition of each practice with more elaborated documents: learner's manual, technical card, educational videos and to add photographic materials to the practices database
- creating a computerised tool that integrates the information provided by the learner with photo and video materials/ evidences.

Criterion 3: Feedback and further development at an individual level

For the stability of quality management regular feedback is essential: The vast majority of personnel (managers, teachers) should obtain regular feedback from different sides. They should appreciate and use the feedback as a valuable source for continuous learning. The feedback can be used to improve individual performance. There are various improvement measures based on the feedback results in place.

Regarding the system of students' feedback and evaluation at Audi's training school, it is necessary to highlight the following aspects:

- Incorporation of several evaluation processes aimed at successfully overcome the Chambers assessments.
- Previous evaluations of theoretical and practical knowledge of the work carried out: in the activity model of a piston engine, a prior knowledge assessment is performed with a single test, spending 2 hours at this job. There are also other assessment processes and control over the project.
- The teacher monitors students through personalized tutoring.
- Assessments and control at every stage of the process step by step: Information / Planning / Decision making / Doing / Controlling / Evaluation "
- The student writes a weekly report which reports on the activities and competencies carried out .
- Monitoring reports presented in dashboards on the progress of ongoing projects, performance, attendance and sick leave, among others..

#### 4.10 Overall Assessment

##### Strengths

The educational centres and institutions reviewed are all - to varying degrees – examples of good practice. In the following the strengths and areas of improvement of each institution reviewed are illustrated briefly.

The Audi Training centre is an example of best practise with focus on quality education, absolutely out of ordinary approaches (but very embedded in a context) . The enterprise (the Training Centre) has a strategic vision (preparing the workforce of the future). It is a global player and a global leader, investing in people, in a global perspective (same professionalization path = same quality standards). The internal career just beginning with the apprenticeship.

The recruitment process is very selective (1 of 7 finds a place in Audi). This leads to a good mix of learners and a very limited drop out rate.

The teaching and training methods imply a good capacity of fixing adequate and proximal learning goals and provide a sequential development (from simple to complex, from the laboratory to production lines, from amazing experiences in groups to actual workplace life...), inspired by the same approach. Especially the self-directed learning and cooperative work (small groups from 2 to 6 people) ensures a continuous process of learning. The training centre also pilots mobile learning (I-Pads) and uses mobility as a way to award the best performers. Trainers work as mentors (pivotal role of trainers working since the beginning with the groups, in the training department).

The training centre uses formative and summative assessments in learning.

The Coleg Cambria is an example of best practise with focus on well-structured training and education and a high-level standard of quality assurance in assessment.

The flexible combination of different assessment measures as well as the transparency of the recognition and assessment of learning outcomes in a modularized structure of learning and teaching processes ensures both a continuous progress of the students and a stable motivation of learners.

The CRN Valladolid is an example of best practice with focus on well-structured training and a high-level standard of quality assurance in content documentation and assessment. Especially the flexible combination of different assessment measures in a modularized structure of learning and teaching processes and the transparent documentation of learning outcomes as well as the continuous efforts to improve and assure quality management are outstanding.

The Střední Škola – Centrum Odborné Přípravy (COP) is an example of good practice with focus on well-structured education and a satisfying standard of quality assurance in assessment. The comprehensive curriculum covers all technical and operational requirements and also includes significant elements of general education and the promotion of personal and social skills. The practical training is partly done in weekly internships with companies.

#### Areas of improvement

The only difficulty, that could occur in regard to Audi is the assessment of trainees. If there were a lack of communication between teachers from the school and trainers from the Training centre it will be problematic to assess the trainees. Furthermore, the transferability to small and medium companies might be difficult due to less resources and less protective training environment.

The Střední Škola – Centrum Odborné Přípravy (COP) does not reach the level of quality of the other educational institutions reviewed especially in regard to the premises and to the balancing of theoretical and practical training. The practical training could be improved in regard to time and quality.