Quality standards for evidence-based VET
EQAVET indicators 5 and 6

Work package 4
Study gaps in policy and implementation of evidence based VET

"Providing evidence of VET relevance"

Comparative summary of the national survey reports
of the United Kingdom, Greece, Italy and Sweden

Revised draft (input IT, UK and DK) February 6th 2020.
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Co-funded by the Erasmus+ Programme of the European Union

This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein. ***Project No:*** *590210-EPP-1-2017-1-SE-EPPKA3-PI-FORWARD*

Table of content

I. Management summary

Introduction

The approach applied is based on the presumption that there is and there always will be some distance between VET programs and job requirements. The assignment for VET partners and their policies is to be aware of the friction between them and to keep the gaps as close as possible. Work package 3 interviewees propose a stronger collaboration of stakeholders, supported by a standardised approach, a common frame of reference as well as a common vocabulary.

Work package 4 is set up as an experiment with two types of occupational mapping to facilitate the dialogue between VET and labour, in EQAVET 5 and 6 perspective at sector level, using a 'sector map' as a frame of reference for the occupational domain and detailed job descriptions to provide stakeholders with a common vocabulary and a touchstone for work performance and VET relevance. (See paragraph II.A. for further explanation of the approach).

The national survey had 2 main goals:

a. To find out to what extent VET programs proved to be relevant in terms of quantity and quality for the jobs concerned
b. To determine the added value of the approach applied.

Sectors and jobs

Partners varied in sectors to widen the scope of their experiments and chose jobs within the range of EQF level 2-5 to make results comparable. The UK and Greece worked with kitchen staff occupations, Italy chose local and regional banking branch staff and Sweden focused on electricians in housing and utility building.

EQF level	**UK/Greece Kitchen staff**	**Italy Local bank staff**	**Sweden Electrical engineering**
5	Head chef	Area branch coordinator	-
4		Branch manager	Senior/leading electrician
3	Cook/Chef de partie	Vice branch manager	Electrician
2	Kitchen porter		Junior electrician

Extensive occupational profiles were compiled for these 9 different jobs, providing general characteristics, task and ability profiles (both based common lists of tasks and abilities for the professional domains concerned) and completed with an overview of corresponding VET programs.

After finetuning with the sector representatives, these profiles were converted into assessment forms and supplemented with questionnaires for companies and trainees. Similar forms were drawn up for VET schools to classify their programs against the job requirement standards set by the companies.

Quantitative data and VET relevance

Relevant data turned out difficult to find and access. As far as statistical data were available, they lacked the level of detail required to match the (regional) demand and supply per occupation and its corresponding VET program(s). Without being able to quantify the gaps, it became clear there are (growing) shortages in all jobs of two out of the three sectors and three out of four countries involved.

The relevance of VET in quantitative terms proved to be evident for the employment side of EQAVET 5. The placement rate also appears to be relatively high in all three sectors. It's 100% for the in-service training programs applied in Italian banks, between 80 and 90% for the E+El secondary VET program in Sweden. The placement rate of kitchen students in the UK and Greek restaurants and catering is less clear but appears to be high as well: *"All students have a job before finishing the course, some even a year before."* The main problem is that a lot of them drop out of school before finishing their program and graduates leave the sector relatively quickly as well.

Early drop-out is hardly an issue for Italian banks but it is for the Swedish electrical engineering. There, like in the UK and Greek kitchens, is a growing gap between demand and supply because the interest in the trade and the numbers of students are declining. It will require a major and joint effort to turn the tide.

Stakeholders' participation

It took a great deal of effort to engage the 5 companies needed for the national surveys and have them adjust the profiles to their own situation as far as needed as well as to assess their trainees against their own standards for both task performance and ability levels. In total 21 companies participated in the national experiments. They were well spread over various scales and characters and their representatives were very well informed and fully aware of the issues involved.

It proved to be challenging and sometimes impossible to commit the minimum of 3 VET schools. Partly due to the planning of the activities and partly due to the current hectic sectors' circumstances the UK partner had to work around the lack of schools' participation. Luckily they had recent reports on the critical current situation in the sector to fall back on to be able to produce a thorough National report on the (mis)match between labour demands and VET supply. In total 12 VET providers (3x Greece, 5x Italy and 3x Sweden) participated.

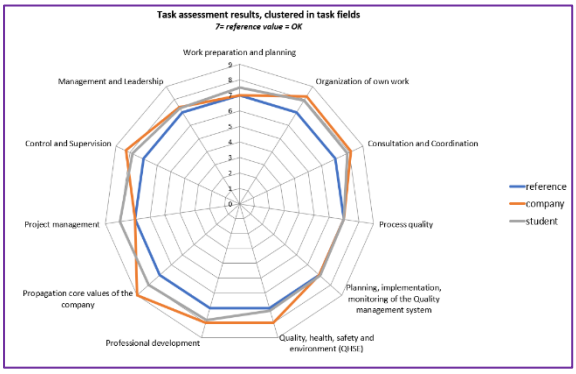
As a result of the non-participation of schools, it turned out to be impossible to have students/apprentices participate in the UK. But even with the help of schools, it wasn't always easy to meet students, for example, because they had exams or were on work placement. In total 70 trainees/fresh graduates participated in the surveys. (Greece 3x10, Italy 3x10 and Sweden 1x10.)

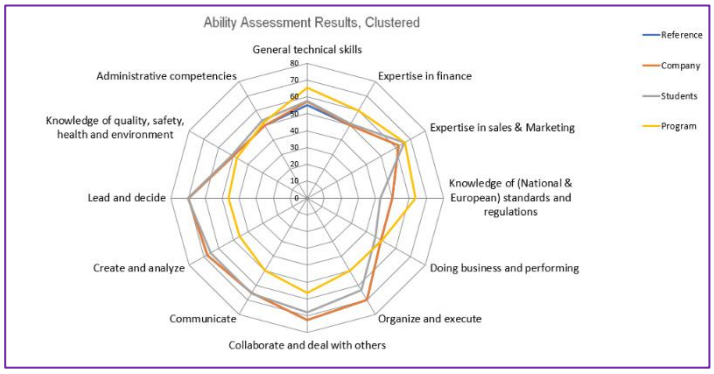
In addition to the three key actors involved, other stakeholders also participated in the research. Sector organisations, as well as a local authority on lifelong learning, participated actively in the national activities.

The Italian partner Effebi is the only partner that is itself part of the educational infrastructure of the sector they are investigating. This makes their results hard to compare with the rest but focusing on in-service training programs made it relatively easy for them to be successful in committing, VET providers and trainees/graduates as well as in conducting the full range of activities as intended.

Assessment outcomes and qualitative relevance of VET

The assessment results were processed and visualized in graphs like these two Italian examples.





The images show the aggregated average assessment scores of companies (**orange**) and students (**grey**), compared with the standard (**blue**) for task clusters (left diagram) and ability clusters (right diagram). The ability scores on the right are supplemented with the classification (**yellow**) of the intended end level of the relevant VET program for the job concerned. The details of individual tasks and abilities were presented in corresponding bar charts.

The tasks scores often exceed the standard in the opinion of both companies and trainees. The ability scores are matching the standard in most clusters. These results imply a high degree of satisfaction for both employers and students with the craftsmanship developed in the vocational training provided.

The average VET classification deviates from the standard: upwards for knowledge and skills, downwards for soft competencies/personality. Teachers seem a bit pretentious on the hard skills and modest (or realistic considering the lesser trainability) regarding the soft skills. The Greek and Swedish VET classifications also deviated from both standard and company scores.

The Swedish and Greek assessment outcomes were comparable with the Italian scores and thus provided proof for VET relevance in terms of content and quality. This was confirmed by the students' satisfaction regarding schools and programs as expressed in the interviews. The UK outcomes (of only the companies' assessments) however confirmed the dissatisfaction with and little appreciation of the current iVET programs as was also expressed in earlier project reports.

Reflection on activities carried out

1. The surveys were conducted in a time schedule that did not fit the schools' rhythm and activities.
2. Sufficient labour and VET statistics proved to be a challenge.
3. Despite the 'crises' in the UK's culinary sector (which made it hard to commit schools) the approach, its tools and activities "fell in fertile ground" and have good potential to be used in the near future.

Reflection on results achieved

1. The current job profiles as presented are consistent and clear.
2. The 'automatic' match in of the Italian in-service training for local bank staff cannot be compared with the evident shortages and ample employment in the other sectors and countries involved

3. iVET programs in three of the four countries proved to match the job requirements in general with room for improvement regarding the next three aspects.
   a. *Future job changes*
   b. *iVET and job attractivity (image/perspective/conditions)*
   c. *Work placement volume and quality*
4. Need for structural collaboration of sector and VET representatives regarding
   a. *Sector and VET marketing*
   b. *Future program development*
   c. *Work placement arrangements*

Reflection on tools applied

1. The Sector map
   a. *Proved to be easy to draw and helpful in visualizing the occupational domain and placing the jobs in their context*
   b. *Proved to be often hard to fill with corresponding VET programs (but also a good first test of VET coverage of the need for (initial) vocational education)*
   c. *Proved to be even harder to fill with statistical information because the information wasn't available at the level of detail required (and at the same time proof of the difficulties in determining the quantitative demand for and supply of freshly trained new workers)*

2. The job profiles
   a. *Proved to be relatively easy to compose and needed little adjustment to match the companies' expectations*
   b. *Proved to be (very) well recognized by companies, schools and students*
   c. *Proved to be more generic than expected. Their content turned out to be largely identical in companies varying in scale and character.*
   d. *Proved to be easy to convert to and (with a little explanation) very suitable as an assessment form*
   e. *Turned out to be highly appreciated by the companies not only as a clear and specific common job description but also suitable for job appraisal interviews and career planning.*
   f. *Proved to be an appreciated addition to national qualifications and be used to discuss job contents, student performances as well as trends and developments with short term expectations regarding VET curricula and learning materials.*
   g. *Might have to pay additional attention to the jobs context (like the sectors' 'sexiness', salaries, working conditions and HR-items in management profiles.*

3. The assessment forms and questionnaires
   a. *Proved to need more explanation and instruction than expected for both interviewers and interviewees*
   b. *Proved to be a lot of work to fill in by the interviewees and to process by the researchers*
   c. *Are especially hard for students by the lack of experience and reference. Their scores must, therefore, be viewed critically.*

Reflections on the approach applied

1. Implementation of this approach seems difficult "from outside" (UK, GR and SE) and relatively easy from a 'position within the sector' like in Italy.
2. Much appreciated by companies and schools.
   Italy: Evident added value. Clarity in jobs for evaluation purposes as well as for career development
   United Kingdom: SKM approach aligns with current thinking in terms of closing the gap between VET and labour demands and would add value to the implementation of external quality assurance by focussing on students' performances as well as to early age interventions in career counselling.
   Sweden: Much appreciated by both the companies and schools for finding common ground in job requirements and VET qualifications and to explore (the impact of) changes.
3. The target group of students/trainees should also involve dropouts and graduates who don't work in the jobs they're trained to investigate their satisfaction with their professional training and quality.

Reflections on EQAVET indicators 5 and 6

Both indicators seem to approach relevance primarily from the students perspective. 5 looks at employment opportunities for graduates and 6 at the use of and satisfaction with the acquired knowledge and skills. The project explicitly included the employer's perspective: Indicator 5 can also ask for sufficient young people are being trained to meet labour market demands. Indicator 6 could consider the VET coverage of the knowledge and skills required for good task performance.

Recommendations

The desired collaboration or rather co-makership of VET and labour representatives for making and maintaining a sustainable match of labour demand and VET supply requires a standardised approach with a common vocabulary and structure to be developed and implemented at different levels.

1. At National level
   a. *Address and support social partners at sector level regarding a clear articulation of their labour demands for the short and long term. Give them the lead in defining job requirements as a basis for qualifications*
   b. *Create and support an (institutional) infrastructure with clear instructions, guidelines and formats for joint translation of job requirements and developments towards qualifications and targets by VET and labour representatives*
   c. *Conduct frequent research to generate and communicate adequate statistical information to facilitate policymakers and VET programmers.*
   d. *Create balance in responsibilities and control of VET and labour in policies and programs.*

2. At (national) sector level
   a. *Be as clear, specific, honest and up-to-date as possible on labour demands, job requirements and career perspectives*
   b. *Create a network of companies committed to education issues to discuss educational issues and represent the sector.*

   c. *Take the lead in setting the standards for craftsmanship and the dialogue with VET providers on qualifications, curricula and learning materials.*

3. At Regional level (of colleges and companies)
   a. *Make active use of job profiles as applied in the QSE project to support work placements and companies' assessments and evaluations*
   b. *Make sure end term documents and curricula relate to and correspond with tasks to be performed, (work) results to be achieved and abilities to possess.*
   c. *Pay attention to innovation as a separate subject in curricula, (work placement) assignments and learning materials*

Open issues

1. How to find/follow school leavers/graduates not working in the jobs/sector trained for?
2. How to share and discuss the findings with relevant stakeholders?
   a. *Policymakers*
   b. *VET programmers,*
   c. *Sector organizations*
   d. *Companies*
   e. *Schools*
   f. *(future) students and their parents*
3. In what frequency should surveys like this be conducted?
   a. *Minimum parallel to the duration of the VET programs concerned?*
   b. *Maximum on an annual basis?*

II. Introduction and setup of the national research projects

A. Introduction

In the first transnational meeting,[1] the project partners discussed different options for mapping out job requirements as a touchstone for VET programmers and programs to provide proof of VET relevance for the labour market. In the presentation of the Work Package 3 (Awareness raising) results in the second transnational meeting[2] it became clear that the occupational mappings intended would well connect to the findings of work package 3.

1. "Let's talk about craftmanship"

Work package 3 respondents state that future actions on connecting VET supply with labour market demands should focus on communication between the labour market and VET providers. In the same Rome meeting partners made a final choice to apply a type of occupational mapping inspired by the Dutch SkillsManager -an instrument to support SME's in improving their HRD activities- to provide in three of the proposals to accommodate the dialogue on craftsmanship by companies and schools:

- a standardised approach
- a common frame of reference
- a mutual language

The intended National research in WP 4 thus acquired the character of an experiment, a pilot with this type of occupational mapping as a method for establishing (gaps in) VET relevance for the labour market and supporting the dialogue on increasing that relevance.

2. Job skills as a moving target for VET[3]

The approach applied is based on the partners' presumption that there is and there always will be some distance between VET programs and job requirements. The assignment for VET partners and their policies is to be aware of the friction between them and to keep the gaps as close as possible.

The big challenge for initial VET programs is to make the match between two totally different parties. On the one hand, there are the students (and their parents) on the other side there is the working society. Students have a need for education that matches their ambitions and possibilities but also gives them a good start and employability on the labour market. The labour market has a need for the right amount of well-trained workers but is hardly capable of defining it. The students are the customer of education as well as the product for the labour market. The businesses are customers of VET-graduates as well as co-producers of VET-programs (for instance by offering apprenticeships, instructors, examiners, etc.).

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[1] *Larisa (Greece), February 8th and 9th 2018*

[2] *Rome (Italy), October 4th and 5th 2018*

[3] *Source: "Studeren op ontwikkeling", N.P. van den berg and M. Sprengers, MarktMonitor 2009 (Summary of a lecture series discussing lifelong learning from 6 perspectives under the title "studying and steering development")*

Jobs evolve slowly but surely. Corresponding knowledge and skills are changing too. The emphasis on problem solving and entrepreneurship, for instance, is growing. This asks more of personality and moral values; professional qualities that aren't easily taught. VET programs must not only provide in professional knowledge and skills but have to put the student on the right track for his or her working future, in tune with the talents available and based on realistic ambitions. It's not just development but also the allocation of talent. It's not just production of craftsmanship, it's the selection for and allocation to the labour market too.

Given these dilemma's, it's a very tough challenge not just to make the better match under stable conditions but to maintain the match in changing conditions too. The matchmaking process takes place in a field of mutually influencing forces that set the agenda for educational policies:

- The *students* want an attractive program;
- The *businesses* expect a well-trained supply of VET graduates in the right amount for right levels and fields;
- The *government* seeks political success within a given (short) period of time;
- The *VET programming system and organizations involved* as well as the *qualification structures* differ per country and form a force in itself;
- The *teachers* want time to get used to new ideas, to experiment with new behaviour and to prepare for new situations;
- *VET providers* themselves have little influence on the (iVET) programs or admission requirements. They're often left powerless and need time for transformations that include a lot of people in the process.

Meanwhile, the future is uncertain and people tend to be more insecure. How to deal with the pressure? Trying to gain influence on the parties could be an option but real influence on these different and conflicting forces asks for a lot of strength and creativity. Do we want education that becomes the playground of the most influential party? Trying to make better, more refined predictions is hardly an option in a growing and faster-changing complexity. The only realistic option is to be more responsive to signals that might lead to changing criteria for VET program quality. From this perspective, VET providers have to be open and alert, seek the dialogue with relevant stakeholders and react quicker to the changes. This also implies that sector representatives and companies take responsibility in establishing and articulating their near future needs based on current trends and developments.

Parallel to being keen on innovations it is necessary to stay level-headed and down-to-earth to avoid hypes and overreactions. Both businesses and students are attracted to 'state of the art' techniques, materials etc. It's tempting to follow trends and hypes. But VET programs need to be robust too. The value of a diploma must be guaranteed for a longer period to be recognized and appreciated. The learning process itself includes time for ripening the professional mind and identity, including the awareness of the ongoing innovation of the profession and lifelong learning. Therefore 'the latest news in professional skills' can never be a dominant aspect in VET program quality assurance.

VET programs have their own lifecycle. Their evolution works by its own rules and is not merely a question of giving in to the (often temporary) needs of the labour market. VET policymakers and

providers, therefore, have to keep and even cherish a certain distance to the working society as long as the mutual interest and communication are guaranteed.

3. Focus on sector and region

The labour market can be examined and described at different scales. Trends and innovations also have a size or scope in their occurrence, impact and effects. The project approach zooms in on the most relevant level.

The (future) needs in jobs and skills are influenced by national and international trends but have to be determined on a sectoral and regional scale to be translated to an individual match between employee and job in an organization or between student and VET program.

Levels in scale

1. International
2. National
3. **Sector/branch**
4. **Region**
5. **Job/profession**
6. Organization
7. Individual

A sector can be described as a collection or community of companies/organizations that share a specific market. Organizations in a sector have similar clients, similar work processes, similar workers who need similar education and training, with similar craftsmanship and a body of knowledge that is often also (partly) shared with customers and suppliers. Because of the consistency (in labour and VET) at a sector level, it's relatively easy to make a meaningful 'map' and to monitor the markets of business, labour and education. At this level, it is also possible to get a grip on the dynamics and their impact on future needs in jobs and skills.

The actual match between the labour market and VET programs in our view is made in the regional context, where demand and supply really meet, varying through different and overlapping sectors and branches but within the travelling distance from home to work or school.

	general	**sectoral**
(inter-) national	trends in population and workforce, economics, politics, technology etc.	sectoral variation on general trends and additional sectoral changes in qualitative and quantitative needs in labour.
regional	regional variation on national trends and additional regional changes in quantitative and qualitative needs in labour.	criteria for the present and future match in labour and workforce in their number and craftsmanship.

The better match between VET and labour, therefore, needs a dialogue between the stakeholders on two different agenda's and at two different levels:

- National/sectoral dialogue on the *content* of VET qualifications (the bulk of a curriculum!)
- Regional/sectoral dialogue on the *volume* of students/trainees and regional focal points in the specialisation.

4. A "sector map" as a common frame of reference for jobs and education

To make that better match between labour and education, the stakeholders need a common frame to set the scope and define the domain in a way that is understood by both the working world and the learning world: a "sector map[1]". This sector map maps out occupations (and VET programs) on two dimensions: level and content. The level is given by levels of education, parallel to the European Qualification Framework. The content is given by the obvious division into different work processes and corresponding jobs and careers in the sector.

This example is taken from the Dutch builders' merchants sector. Its most specific and common jobs and careers are highlighted in red.

level	Logistics	Sales office	Field & showroom
5	Logistic manager	Product manager	Marketing manager
4	Chef expedition	Technical specialist	Account manager
3	Storekeeper	Back office / Sales	Field & showroom
2	Warehouse personnel	Counter personnel	Receptionist
1	Order picker	-	-

Such a 'map' of the sectors' jobs and careers is a strong frame of reference for corresponding VET programs and learning paths. Each cell contains a profession or a consistent group of jobs. The corresponding VET programs can be easily projected on the same grid to see whether there is a fit between jobs or labour demand and VET supply. It's also possible to project quantities of workers; the yearly outflow and need of new inlet can be projected to determine the number of vacancies. Is there a shortage or surplus? The same can be said about demand for and availability of work placements.

The map also provides a background to dynamics in the sector: mobility of workers and innovation of the jobs. For instance: How many order pickers would like to be trained in their commercial skills to make a step towards a counter job? Which VET-program facilitates that career? Or: Which jobs are affected by the implementation of ICT-systems? What programs do we have/need to train the various employees? Instruments like the sector map are a prerequisite for transparency and good communication between education and the labour market at a regional level.

5. Standardised and extensive job descriptions to provide a common vocabulary

As far as companies do have occupational profile descriptions, they use different formats and words. Companies are used to specify jobs in tasks, authority and responsibility. In addition to this, the job is often labelled with a level of (VET) qualification and a specification of the mental/physical load. It appears to be very difficult for executives to define what professional qualities they need for the various jobs in their firms. The relevant (level of) knowledge and skills, necessary for developing VET-programs, is rarely given in such a way that a VET developer can make use of it.

VET developers define the intended learning outcomes of their programs in (end-) terms of knowledge and skills to possess at a certain level. They express themselves in language companies are not used to.

[1] *Chapter IV.A. shows the various sector maps produced and applied in the National research*

For a better understanding between the working world and the learning world, they need a mutual vocabulary to talk about craftsmanship. Our approach maps out job content in task and ability profiles, supplemented with characteristics and mental/physical load, in a fixed format of 4 sheets[1].

Job characteristics:

This kind of information can often be obtained from different sources like vacancy texts, job descriptions, collective labour agreements, existing qualifications, etcetera.

- General characterisation
  A short description set the scene, catching the 'professional identity' of the occupations concerned
- Aliases
  Companies use their own job titles. The aliases anchor these different names to the common occupational profile.
- Level of working/thinking
  Often following the EQF level of the most relevant iVET program for the job at hand
- Autonomy & complexity
  Added and combined to give body to the level of work and thinking required. It's meant to get grip on the combination of self-consciousness, responsibility and sociability needed to cope with daily dilemma's
- Mental and physical load
  Added to address personal capabilities that might be hard or impossible to develop but do need attention in career choices to be made by the learner. iVET is about both "breeding and selecting" of talent for society and labour. Schools have a responsibility in assuring the student is "fit for the job" to prevent disappointment and frustration of the learner as well as his/her future employer.

Tasks to perform

- *The tasks are selected from a list that covers all occupations concerned in the sector (or in this case: the national surveys)*
- *The degree of detail in tasks is a matter of finding a balance between (a) as little tasks as possible to be generally applicable and (b) as many tasks as necessary to distinguish occupations from each other.*
- *Tasks are ideally named/described as a well imaginable professional, human activity with an evident result.*
- *Tasks are clustered in (short and recognizable) "task fields" and sorted in the order of the work itself; from preparation to completion.*
- *A single job normally can be described by selecting a minimum of 20 and a maximum of 50 tasks.*

Abilities to possess

To avoid discussion on definitions as well as to include mental and physical conditions, we like to talk about "professional abilities". The general idea here is similar to the task profiles: Compose one list of abilities to select from and put them at the level required for the job at hand. The abilities are clustered by similarity and sorted into 4 categories:

[1] *This template has been applied by the partners in their national activities.*

- General knowledge and skills
  This category can be compared with the EU key competencies.
- Specific (sector/job) vocational knowledge and skills
  This category tends to be well described and covered by qualifications
- Mental and physical capabilities
  Elaboration of the items mentioned in the characterization.
- Diploma's and certificates
  Lots of occupations require certain registrations or personal certificates like a driving licence for chauffeurs.

6. Job profiles as a touchstone for craftsmanship

The job profiles composed like this can be used for different purposes:

- Providing sample profiles for companies to make their own job descriptions, helping them to express their requirements and expectations (relevant for both workers and trainees.)
- Investigating variation and development *within* job profiles (tasks and -levels of- abilities),
- Investigating variation (similarities and differences) between related jobs, to establish VET content to accommodate career steps.
- Measuring the performance of workers and trainees (e.g. to establish and compare their own and their employers' satisfaction).
- Classifying start- and end level of VET programs to establish the coverage of job requirements to prove the qualitative relevance of VET.

B. Set up and activities

The setup of the National WP4 experiments can be summarized by
"Applying the approach as described above, to a national sector/branch/profession to experience what it yields in terms of results (proof of VET relevance for the labour market?) as well as in terms of added value (Easier/better understanding and cooperation between VET and labour representatives to support their dialogue on a better match of VET and labour?)".

In the Transnational Partners meeting, the consortium agreed on the next activities to perform from October 2018 till October 2019.

1. Sector selection

In Rome, partners vary in their sectors and thus widen the scope of their joint investigation.

Partner	Country	Sector/profession
Rinova	United Kingdom	Hospitality sector, Kitchen staff
Dimitra	Greece	
Effebi	Italy	Banking and Finance, Local bank branch staff
Folk University	Sweden	Installation technology, Electricians (in housing and utility building)

2. Job selection

In the same Rome meeting partners also agreed to aim for jobs/qualifications within EQF levels 2-5 to ensure comparability of their findings as well as to investigate some of the most common jobs of the sectors/branches involved.

EQF	UK/Greece Kitchen staff	Italy Local bank staff	Sweden Electrical engineering
5	Head chef	Area branch coordinator	-
4		Branch manager	Senior/leading electrician
3	Cook/Chef de partie	Vice branch manager	Electrician
2	Kitchen porter		Junior electrician

3. Gathering data/statistical information on labour and VET

EQAVET 5 criteria require a quantitative comparison of labour demand and VET supply as well as an analysis of destination of graduates/school leavers. It proved to be very difficult to gather relevant figures with enough detail. The results are presented in chapter IV, describing the quantitative relevance of VET for the national occupations concerned.

4. Job profile development

The occupational profiles were composed in line with the Dutch examples and guidelines provided by Rinova. They were produced in English and translated in the various national languages (Greek, Italian and Swedish). The content of the profiles is discussed in chapter II.B and C.

5. Survey and questionnaire production

After checking and adjusting the job profiles in cooperation with the sector representatives in each country, they were converted to survey forms and supplemented with questionnaires following the guidelines provided by Rinova. All forms were made available in English and the other national languages (Greek, Italian and Swedish).

6. Recruitment of companies, schools and students/trainees

The goal was to involve (at least) 5 companies, 3 schools and 30 students/trainees per country. This proved to be more difficult than expected. The national results can be summarized as follows.

The United Kingdom, kitchen staff

- Six companies from the London region, varying in character, scale and menu's and represented by their owners/executive chefs.
- Despite reaching out to several colleges, Rinova has not been able to engage schools in the project nor to reach students/trainees.
- Luckily Rinova could draw upon the results of the "Pan Out" project which involved a large group of employers, schools and students and addressed similar issues as the QSE WP4 activities.

Greece, kitchen staff

- Six companies were invited from which 5 contributed to the assessments and surveys.
- Three schools participated in the project and provided the students.
- Sixteen student self-assessments: 10x Kitchen porter, 3x cook and 3x head chef

Italy, banking staff

- Six national and international banks, varying in scale from small to large institutes, all working with a national network of local branches, organized in regional hierarchies
- Three Training Centres, providing internal VET programs for the jobs involved.
- Thirty employees, 10x new in the 3 roles concerned

- Additional representatives of the banking sector organisation (ABI) and its educational agency (FEDUF).

Sweden, Electrical engineering

- Five companies, well spread over the region with a big variety in character and scale: from small local firms to (inter)national concerns with thousands of workers spread over the country in regional locations.
- Four secondary VET schools from which three the most relevant (El+E) program
- The employers association for the Swedish installation technology sector, represented by its senior educational policy officer.

7. Conducting interviews/surveys

Companies and schools are interviewed individually, using the questionnaires and requested to fill in the survey forms. Trainees were approached in groups. After a short introduction of the project, they were instructed to fill in the questionnaires and survey forms.

8. Data processing and presentation

Interview and survey data have been processed, visualised and interpreted. The results are presented in chapter V.

9. Focus group discussion

Companies, schools and sector representatives were to be invited to participate in a focus group to discuss the findings of the research as well as to reflect on the approach applied. Only Effebi has been able to realise this common discussion on findings and reflection on the approach with the Italian banking sector and its VET providers.

III.Branches, jobs and VET programs

A. Branches and jobs

The jobs are presented in a "sector map", providing a good insight into the mutual relationships and career pathways.

The table on the right shows the kitchen brigades of the UK and Greece. The related departments and professions have been left out because they can differ greatly depending on the nature of the organization of which the kitchen is part.

The UK and Greek research has focussed on restaurants and catering services and zoomed in on the three highlighted jobs.

British and Greek Kitchen staff	
EQF Level	**Occupations**
5	Executive chef **Head Chef** Sous chef
4	
3	**Cook / Chef de partie** Commis chef
2	**Kitchen Porter**

The next table shows the local and regional branch banking staff in Italy.

Italy's Commercial Banks - Retail			
EQF level	**Planning and Management**	**Operational Commercial**	**Supervision and Control**
6	Regional manager	Personal Planner	General Supervisor
5	**Area branch coordinator**	Personal Advisor	Compliance Manager
4	**Branch manager**	Investment Practitioner	Risk Manager
3	**Vice branch manager**	Daily Banking Advisor	Risk and Compliance Officer

The project zoomed in on lower and middle management at local/regional level.

The last table shows a part of the Swedish installation technology sector. The research zoomed in on electrical engineering for housing and utility building and within that segment on the most common and recognizable operational occupations at mid-level VET.

The three distinct levels of the jobs concerned* appeared to be less clear in Sweden so the further research focussed on "Electrician" at EQF level 3.

Sweden hasn't yet implemented the EQF levels. The installation sector uses a similar scale that starts at a higher level. The secondary VET programs for electricians are rated at IQF level 4.

Swedish Electrical installation technology for housing and utility building				
EQF (IQF) level**		Preparation, Logistics and Planning	Installation, Service and Maintenance	Management Administration and Support
High-level VET	6 (7)	Technical Manager	Operational Manager	General Manager Commercial Manager
	5 (6)	Project Manager	Head Execution Service Manager	Controller HR officer
Mid-level VET	4 (5)	Planner/Engineer	Technical Specialist (Senior/Leading Electrician*)	Office Manager
	3 (4)	Draftsman	Service Engineer **Electrician**	Bookkeeper Secretary
	2 (3)	Warehouse Worker	(Junior Electrician*)	Administrative Assistant

B. Occupational profiles

Following the examples and instructions provided by Rinova, the partners produced draft descriptions that were well recognised in general. The remarks and adjustments made can be summarized as follows.

1. Job characteristics

The characteristics were very well recognised in general. Similar descriptions are used (in collective labour agreements) for the purpose of salary ratings.

Italian Banking staff

The characterisation was supplemented with one alias for the area coordinator: "Hub Manager"

Swedish Electricians

The three jobs* distinguished in the initial draft are in fact three versions of one occupation: electrician.

- The "junior/apprentice electricians" are freshly started employees in their first year after Gymnasium/upper secondary VET.
- The mid-level electricians, also called electrical installers or service engineers are allowed and able to work on their own
- The "senior or leading electrician" has five years of experience and is a specialised electrician and/or team leader

2. Tasks

The task profiles were very well recognized and appreciated with some minor adjustments. The vast majority of these adjustments concerned the ticking "on" or "off" of tasks from the list. Only two tasks have been added to the (Italian) list itself.

3. Abilities

The abilities and their levels required were also very well recognized. Only in Sweden, the level of some specialized technical knowledge and skills were adjusted downwards. The electricians need to know the basics but can rely on others for additional expertise in the next eight areas:

- *Security installations*
- *Home automation*
- *Light and lighting technology*
- *ICT and telematics*
- *Fibreglass technology*
- *Industrial automation*
- *Emergency power installations*
- *Electro-technical inspection technology*

4. Relevant VET programs

The (most) relevant iVET and cVET programs for the occupations concerned are added to the job profiles to be as clear as possible about the desired education as well as the learning pathways to support careers. The relevant offer of VET programs for the occupations concerned is shown in the next four tables.

Relevant Greek VET programs for kitchen personnel				**porter**	**cook**	**chef**	
iVET	**EQF level**	**Duration**	**full/part time**	1 = desirable 2 = required			
Kitchen Porter, Responsible for buffet, food service	2		N/A				> 2 years experience
	3	3 years	full time	1			> 4 years experience
Cook, pastry chef, bakery, Professional Cookery	3	3 years	full time		1	1	0-25% WBL
	4	2 years	both		1	1	80% WBL
Head chef	5	2 years	both			1	20% WBL
cVET							
Food safety and hygiene*	2+	10 hours	N/A	2	2	2	
Food handling	3+	50-100 hours	N/A	1	1	1	
* prerequisite: Certified food handler							

The Greek iVET programs appear to be 100% in sync with the three jobs hand.

Relevant UK VET programs for kitchen personnel				porter	cook	chef
iVET	**EQF level**	**Duration**	**full/part time**	1 = desirable 2 = required		
Kitchen Assistant: Introduction to Hospitality Industry; Certificate in General Cookery	1	49-370 hrs	both	2		
Kitchen Assistant: Award in Food Safety	1 & 2	30-60 mins	n/a	2		
Chef de partie: Professional Cookery NVQ	2	>1-year	both		2	
Chef de partie: Professional Cookery Higher National Diploma	3	12-18 months	both		2	
Head Chef: HND Professional Cookery	3	2 - 4 years	both			2
Head Chef: Foundation Degree in Culinary Arts	3	3 - 4 years	both			2
cVET						
Hospitality Compliance: Health and Safety	1+	1 day	n/a	2	2	2
Hospitality Compliance: Food Allergens	1+				2	2
Hospitality Compliance: Hazardy Analysis/Critical Control	2+	1-days	n/a	1	1	2
Hospitality Compliance: Manual Handling	2+	1 day	n/a	1	1	1
Hospitality Compliance: Manual Handling	1+			2	1	1
Hospitality Compliance: First Aid				1	2	2
Hospitality Compliance: Fire Safety				2	2	2

The UK VET supply turns out to be more differentiated than the Greek and to have a higher degree of compulsory diplomas.

Relevant Italian VET programs in Finance and Banking Sector				Vice Branch manager	Branch Manager	Area Branch Coordinator
iVET	**EQF level**	**Duration**	**full/part time**	1 = desirable 2 = required		
Management, Finance and Marketing Technical Institute	4	5 years	full time	1	1	1
Technical Commercial Institute – Legal Business address	4	5 years	full time	1	1	1
Junior Banking Program	4	18 months	both	1	1	1
TRIPLE E EFCB	4	150-180 h	both	1	1	1
cVET						
Banking & Financial Diploma	5+	12 months	part time	1	1	1
MIFID I	4+	30 hours	online	2	2	2
MIFID II	4+	30 hours	online	2	2	2
Risk management	4	9 days	both	1	1	1
Workplace health and safety	3+	1 - 2 days	full time	2	2	2
GDPR Data protection	3+	5+ hours	full time	2	2	2

The National Collective Bargaining Agreement of the banking sector foresees that Banking Institutes provide professional training activities to their employees with a permanent contract, as follows: a. not less than 24 hours per year of professional training during working hours, b. additional 26 hours per year, 8 of which paid, to deliver during the working hours and 18 hours not paid outside the working hours

The job-specific cVET programs (including the iVET junior banking program) for the three occupations concerned are provided as mandatory in-service training.

Relevant Swedish VET programs for electricians (in housing and utility building)				**assistant**	**electrician**	**lead/senior**
iVET	**EQF level**	**Duration**	**full/part time**	1 = desirable 2 = required		
El + E Secondary VET program	3/4	3 years	full time	1	1	1
cVET						
INSU A* (independent electrician)	4	?	part time		1	2
INSU AL* (high voltages)	4	?	part time		1	2

** Personal competence certificates based on electrical regulations.*

The El + E program is one of twelve vocational programs in upper secondary education, offering a fairly broad basis for electricity-related occupations. In addition to electricity, students can opt for "data" or "energy" in their final year.

Summary conclusions

The iVET offer in three of the four countries/sectors is provided in upper secondary vocational education, including WBL components, focused on nationally determined qualifications and provided by public as well as private institutes. Formal qualification may need additional certification or accreditation exams.

The Italian banking has an inflow of students with a general administrative and financial background who need specific further on the job training for the jobs concerned. Qualifications/programs are determined in collaboration of bank and training institutes.

C. Job and VET dynamics

Job requirements are subject to trends and innovations and therefore are a "moving target" for VET; both in terms of quantity (demand and supply) and quality (job content). Not only labour is subject to change, (vocational education and training are too. The main trends and developments in the various professions and corresponding VET supply can be summarized in the next short sector/country overviews:

UK kitchen staff

A. Labour demand

- Growing demand for well-trained personnel
- High and growing shortages, largely because of the high dropout rates: the departure of European personnel leaving for Brexit and a large turnover among (often female) employees
- Decreasing interest of youngsters and their parents

B. Job content

- Diversifying kitchen menus
- Upscaling of culinary quality

C. VET dynamics

- Decreasing numbers of students and high dropout rates
- Outdated VET qualifications and programs are under attack
- New cook-related apprenticeships

Greek kitchen staff

A. Labour demand

- Increasing popularity of Greece > growing hospitality/tourist sector.
- Seasonal shortages (and off-season surpluses)

B. Job content

- No specific items mentioned

C. VET dynamics

- No specific items mentioned

Italian banking staff

A. Labour demand

- Merging banks > reducing staff > sustaining demand at higher levels required

B. Job content

- New (financial) products and services
- New apps for customers
- New methods and technologies
- Higher standards for employees' efficiency, integrity and effectivity

C. VET dynamics

- Growing demand for digital skills in nine out of ten job profiles
- Growing demand for data and market analysis, information security and artificial intelligence

Swedish electricians

A. Labour demand

- A (growing) shortage of electricians
- Decreasing interest in technical jobs
- Decreasing inflow of students in technical education

B. Job content

- Increasing attention to service and maintenance
- New regulations (EU)
- Sustainability
- New products and materials
- New techniques
- 'Smart buildings'

C. VET dynamics

- Decreasing numbers of EI+E students
- Third-year specialisation: Automation, Data
- Shortage of teachers (ageing/retirement of 'baby-boomers')
- ETG development and implementation (extra monitoring and practical examination)
- SeQF development/EQF implementation (showing a lack of variety in VET supply)
- Growing commitment of sector for VET policies (but also too little involvement of individual companies)

Summary conclusions

Companies and schools recognize similar issues and agree on the need to discuss how to deal with them. The (growing) shortages in workers, students (and teachers) seem to be the bigger problem and the hardest to handle. The evolving job content seems relatively easy to convert to VET curricula and learning materials. Adjustment of qualifications, however, is beyond the grip of schools and companies and has to be addressed at national/sector level.

IV. Quantitative matches and gaps

EQAVET indicator 5 is about VET relevance in terms of numbers of students reaching and getting employed in the jobs they're trained for. The employers' perspective also asks for sufficient supply of new workers. Therefore the project focussed on a (sustainable) quantitative match of demand and supply. This chapter presents an overview of national findings, not only in terms of finding (relevant) work after training but also in terms of an adequate supply of graduates for the labour market.

UK kitchen staff

Despite there being a plethora of reports on overall skills shortages, hard to fill vacancies and apprenticeships, for example, finding statistics for the specific job roles of Kitchen Assistant, Cook/Chef de partie, and Head Chef, proved impossible. The estimated numbers of workers per job are shown in the next table, accompanied by the relevant VET programs.

EQF	Occupation	# Workers	iVET programs	Duration
4/5	Head Chef	255.000	University Degree in Culinary Arts, Hospitality Management, Professional Cookery*; Higher Level Apprenticeship; Higher Level National Diploma	3-4 years+ if specialist areas are chosen
3	Cook	190.000	Foundation Degree in Culinary Arts, Professional Cookery; Higher National Diploma	12 weeks-2 years*
2	Kitchen Assistant	234.000	Level 1 Award in Introduction to Employment in the Hospitality Industry; Certificate in General Cookery; Level 2 in food safety; NVQ Level 2 in Food Preparation and Cooking and Food Service	Guided Learning Hours range from 69 for introductory courses through to 170 for Food Preparation and Cooking for example

** Professional Cookery: Level 1 Diploma: 12-weeks; -weeks; Professional Chef – Level 3 Diploma: 1-year*

The UK National report summarizes its quantitative findings like this:

The Hospitality Sector has the lowest proportion of full-time employees out of all sectors, and

- Employs a particularly young workforce (33% <25 years old); 10% are employed on a temporary basis.
- The majority of establishments in the sector (approx. 91%) employ fewer than 25 people.
- The sector is relatively low-skilled; only a fifth of the workforce is qualified to level 4 and above, though this varies by sub-sector.
- In terms of recruitment issues, 32.700 establishments (15% of all sector establishments) have vacancies; 5% report hard to fill vacancies, with 3% reporting skills shortage vacancies.
- A total of 73.700 vacancies were reported across the sector; a quarter of these (18.243) are hard-to-fill and a further 15% (11.178) are skills shortage vacancies.
- 61% of hospitality employers provide training
- Restaurants are slightly less likely to provide training (50%)
- 85% of employees receive health and safety/first aid training
- 63% of employees receive induction training
- By far, the reason employers to not provide training is that they say that staff are fully proficient (62%).

Given the vacancies reported, there are plenty of opportunities for students to find work. This means the quantitative relevance of the programs is evident. The deficit in the sector might be partly attributed to the dropout of VET students but mainly seems to be the result of employees leaving the business before they retire: European cooks departing because of the Brexit and others because of the working conditions. The high turnover over female employees is a special point of attention.

The increasing shortages lead to higher work pressure for the existing staff, making the profession even harder. As far as schools would be able to recruit, retain and deliver more students, it would only be "mopping with an open tap"; a vicious circle from which it's hard to escape.

Greek kitchen staff

The Greek research focusses on the first two out of the next three hospitality branches involved in cooking.

Type of enterprises	Number of enterprises	Number of employees
Restaurants and mobile units	41.171	209.182
Catering services	3.435	11.428
Fast food services & Cafe	81.593	379.041
Total	***126.199***	***599.651***

The number of employees working in these two branches is given in the table below.

Type of enterprises in the sector in Greece	Number of enterprises	Number of employees
Restaurants and mobile units	41.171	209.182
Catering services	3.435	11.428
Total	***44.606***	***220.610***

The number of employees divided into the relevant EQF levels is provided in the following table. Based on the data of the Greek Statistic Authority, it should be mentioned that:

- Approximately 65% of employees are working in service or dishwashing or housekeeping, while 35% as kitchen staff
- The ratio of employees per job profile depends on the size of the restaurant or catering business. A medium enterprise usually occupies: 2 kitchen porters, 1-2 cooks and 1 head chef.

Estimated numbers of employees per EQF level

EQF	Occupation	# Workers	% Certified	# Work placements*	# Vacancies*	% Hard to fulfil**
4	Head chef	9.854	86%	N/A	N/A	80%
3	Cook/chef de partie	47.359	64%	N/A	N/A	60%
2	Kitchen porter/assistant	163.397	11%	N/A	N/A	30%

**There is not any available data per occupational profile. The statistical interpretation of the data related to work placement and vacancies are provided in total.*
***DIMITRA's estimation based on iVET data*

There are no data available per occupational profile. The total number of graduated students from iVET programs related to "food/cook art", as well as the number of certified students, is shown in the table below.

iVET programme	# graduates (2017-2018)	# participants in the certification exams	# certified graduates
Food/cook art	Approximately. 18.000	11.352	8.548 (being 75,3% of participants and 47.49% of the graduates)

Concerning iVET programmes, there are several in Greece provided by different institutions, private or public. That's why the number of graduates is high. Although the curricula seem to be similar, each iVET institution has strengths and weaknesses.

Over the last decade, the student's interest in food-related iVET programmes has been increased as there is a trend in the Greek labour market and television to promote these occupational profiles. This trend motivates both VET institutes to provide more qualitative curricula than in the past and to ask for qualified trainers, who are well-known in their field.

Students have no serious obstacles in finding a job and the placement rates are high so the relevance of the VET programs provided (with or without certification) is evident.

Swedish electricians

It proved to be very hard to get grip on relevant data and statistics. The sector doesn't have specific data on sector segments or occupations so it's not clear how many electricians per year are needed to replace the leavers and enable the growth. At the same time, the branch organisation claims there is room for 10.000 extra workers in the sector as a whole, which would be 20% of the current population of approximately 50.000 workers!

The Skolverket website (the VET agency of the Ministry of Education) shows that there were 4.501 students in the 3rd year of their El+E program (4.367 males 134 females) spread over 195 schools in 150 different towns (April 2019). This means an average of (only) 23 students per school.

The schools state that 50% becomes an electrician immediately after graduation (often in the same work placement company) and another 25-30% does so after some time. These figures are confirmed by the branch organisation with the addition that the ETG-variety (450 alumni last year) has a higher score than the standard program: an immediate inflow as an electrician of 90%! This means 80-90% actually reach the destination they are trained for, but 10-20% is lost for the sector (except for the students choosing further training at a higher level in the same field).

Apparently, the supposed inflow of 3.500-4.000 graduates per year is insufficient to cover open vacancies. This is supported by the students being (very) confident in finding a job as electricians and all companies are yearning for graduates and (good) trainees.

Without the statistics to prove it, there is no shadow of a doubt about the relevance of this VET program for this part of the labour market. It is more than evident!

Solving the shortage of students and graduates implies retaining more students for the sector but also recruiting more students/apprentices (for instance by focussing on new target groups like girls/women, newcomers and side entrants). It will, however, need a very good marketeer to close the current quantitative gap between demand and supply!

Italian banking staff

The numbers of employees in the jobs concerned are given in the next table. The relation between the corresponding VET training is different than in the other countries because it concerns in-service training on top of a variety of previous financial or commercial secondary education.

EQF level	Occupation	# workers
5	Area branch coordinator	997
4	Branch manager	24.932
3	Vice branch manager	17.452

There are no overall numbers available of employees freshly started in these three roles and currently following the mandatory internal programs.

The match between demand and supply of these programs is automatically 100% because every starter in these roles has to follow these programs and the training capacity is adjusted to the demand.

Summary conclusions

It has been very hard if not impossible to get hard figures with regard to numbers of employees or vacancies per profession, nor with regard to the number of students or graduates in corresponding VET programs. Schools do not actively monitor their students after completion or early drop-out of their education.

Without statistics to prove it, it became clear that the VET relevance for the labour market is (very) high in ECAVET 5 perspective. In two of the three sectors (and three of the four countries) the labour market demand is far bigger than the VET supply and graduates have no problem to find work in the jobs they're trained for. From a labour market perspective, the schools fall short in delivering the new workforce needed but this seems more a lack of attractiveness of the work, an image problem of the sector, than a failure of the schools.

V. Qualitative matches and gaps

EQAVET indicator 6 is about using the capacities developed in the VET program and satisfaction of both students (employees) and their employers with the professional performance/competency demonstrated in practice. The task and ability profiles are converted to assessment forms for companies and students. The ability profiles are also used as classification form for the entry and end level of the relevant programs. The national reports show the assessment results of all occupations on both tasks and abilities. The summary below shows four examples of both assessments in one of the occupations in each of the countries concerned. The diagrams show

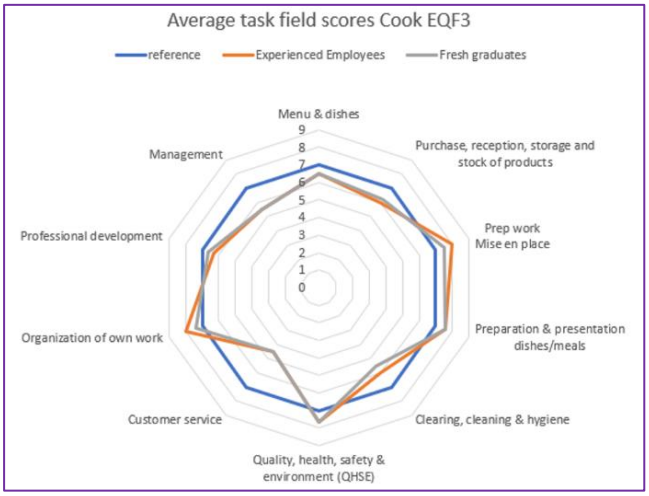
- the standers/reference set by the companies in the job profiles,
- the companies' assessment of trainees/fresh graduates
- the self-assessment of the trainees/fresh graduates
- the companies assessment of experiences workers (UK)
- the schools' classification of the most relevant VET program (GR tasks & abilities, SE and IT abilities)

A. Task assessment outcomes

The graphics below show four examples of the average results at field level of the task assessments.

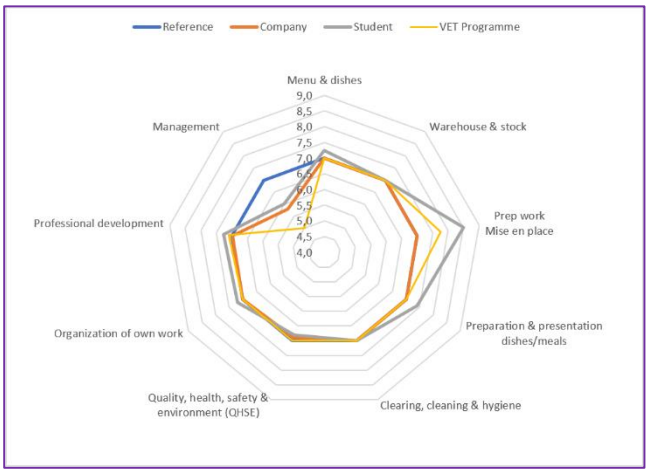
English Kitchen staff: Cook (EQF 3)

The (company) scores for experienced workers and 'fresh graduates' are well in line with each other but not with the performance required: there is a somewhat lower score in the areas of management, menu, purchasing, cleaning and customer service, which may reflect the specifics of roles and responsibilities at this level. There are good scores in the areas of prep work, preparation and organisation of own work, which suggests that these are consistent with the day-to-day requirements of the workplace.

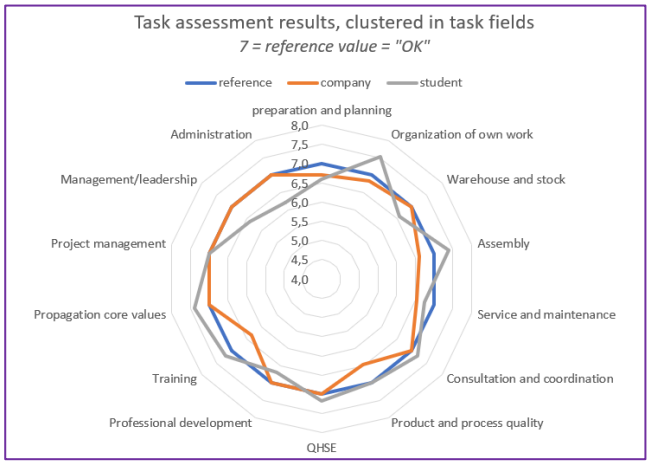


Greek kitchen staff: Cook (EQF 3)

The majority of tasks has been scored in line with the standard by all respondent groups. The managerial task field, however, was assessed lower than the standard. Students seem to overestimate their performance in prep work. The classification of the VET program on tasks is in line with the students score but even lower on management and a bit less above level on prep work.

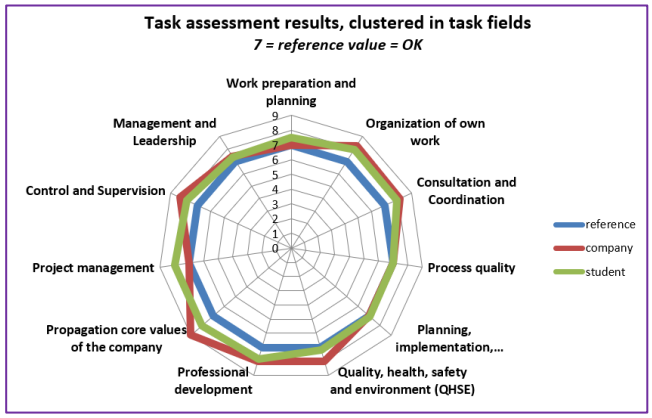


Swedish Electricians (EQF 3)



Companies seem a little critical concerning the practical fields of assembly/implementation and service/maintenance as well as in the fields of product/process quality and training/coaching. Students seem to be less satisfied (or insecure) with their performance in warehouse/stock, service and maintenance, professional development, leadership and (financial) administration. On the other hand, they seem to overestimate themselves a bit in the organisation of their own work, assembly/implementation, consultation/coordination, training and propagation of core values.

Italian Banking staff: Branch manager (EQF 4)



This spider graph shows coherent scores on task performance by newly appointed branch managers and their employers, often exceeding the level required, meaning the freshly trained employees are doing more than OK.

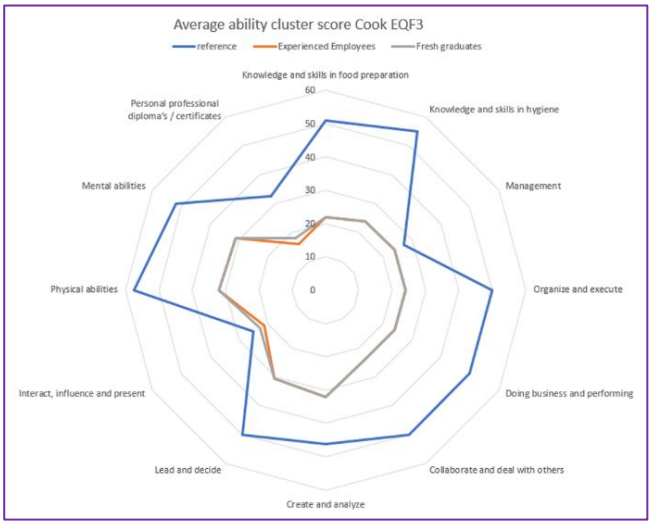
Summary conclusions

The task scores express a large degree of satisfaction with the general task performance shown in practice in the opinion of both companies and trainees. These assessment outcomes support the quality and relevance of the VET programs for the jobs concerned.

B. Ability assessment results

The next four graphics show the average results at cluster level of the ability assessments in the same four occupations

English Kitchen staff: Cook (EQF 3)



The ability levels of experienced employees and the fresh graduates are consistent but -opposite to the task scores - stay well under the level required.

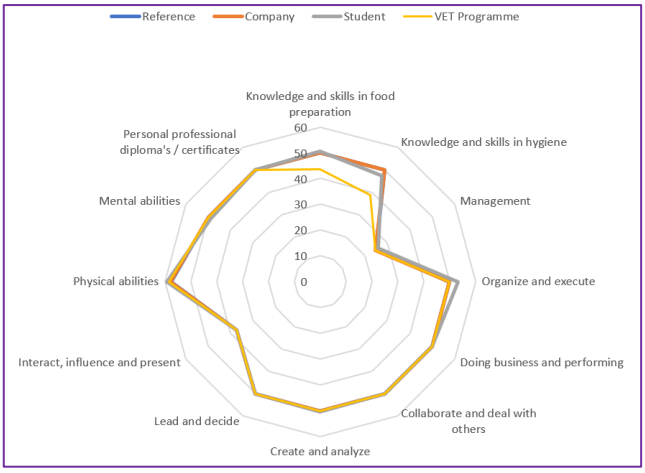
These scores are in line with earlier findings: 43.000 establishments (one fifth) report having skills gaps (194.000 (8%).

Skills are being adversely affected by a number of factors, including temporary employment, transient workers, poor retention rates and low skills utilisation.

Greek kitchen staff: Cook (EQF 3)

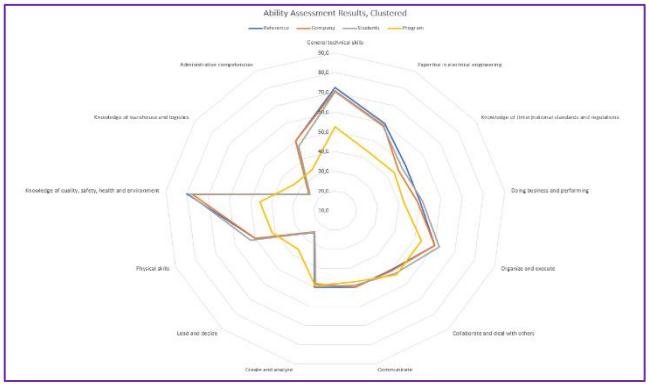
The ability scores of companies and students are coherent and in line with the levels required. The classification of the VET program follows the same line except for food preparation and hygiene

Students seem to do a little better than expected by the schools.



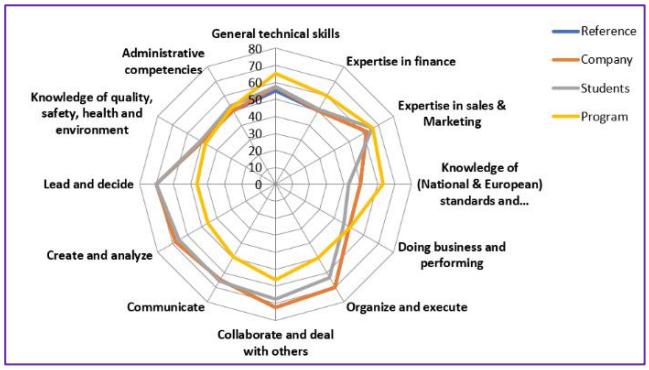
Swedish Electricians (EQF 3)

This image confirms the satisfaction of companies and students: the proven level is well in line with the level required. It also shows that the schools are modest in the classification of their own programs, except for the clusters collaborate and deal with others, lead/decide, warehouse/logistics. The gap that this modesty would imply is strongly contradicted by the satisfaction of companies and students.



Italian Banking staff: Branch manager (EQF 4)

The spider graph shows that the ability scores of newly appointed branch managers are very coherent and in line with the ability levels required (the blue standard line is nearly completely covered by the scores).
The (providers') classification of the VET program, however, deviates on many points from the norm. The end level is overestimated in general technical skills, financial expertise and in the knowledge of standards and regulations, but underestimated in most of the soft skills.



Summary conclusions

Except for the English cooking staff, the ability scores of fresh graduates are well in line with employers' requirements. Classification of the programs against the sectors' standards seems to be hard to do for the schools. They tend to overestimate their scores on the hard skills and to be too modest on the soft skills.

VI. Reflections and recommendations

This final chapter summarizes the reflections on activities carried out by the partners, on the results achieved, on the approach and tools applied and concludes with recommendations at national, sectoral and regional level.

A. Reflection on activities carried out

Most of the activities carried out in this specific setup and sector context were relatively new to the partners. They have not always been easy or even possible to perform and often took more time than expected. The surveys, for instance, were partly conducted in late spring/early summer: a planning that did not fit the schools' rhythm and closing activities of the school year for both schools and students.

In three of the four countries, the partners involved felt that they were a relative outsider in the context of the sector and schools concerned. In retrospect, the activities should have been carried out by or explicitly on behalf of a sector organization. This idea is confirmed by the relative ease with which Effebi, being part of the sector's infrastructure for vocational education and training, has been able to successfully implement all intended activities of the project.

B. Reflection on results achieved

The sector maps and job profiles have been produced in accordance with the specifications and planning. This also applies for the assessment forms and the questionnaires. The results achieved with these tools in proving the relevance of VET for the labour market can be summarized as follows.

Quantitative relevance

The Italian banking sector with its automatic match for in-service training programs cannot be compared with the other two sectors and three countries involved. We, therefore, leave Italy out of consideration in these summary conclusions.

Without being able to quantify the gaps, it became clear the demand for students is bigger than the supply in kitchen staffs of the UK and Greece as well as for Swedish electricians. The relevance of VET in quantitative terms proved to be evident for the employment side of EQAVET 5. The placement rate of kitchen students in UK and Greek restaurants and catering appears to be high: *"All students have a job before finishing the course, some a year before."*. The placement rate of Swedish E+El graduates is between 80 and 90%.

The growing gaps between demand for and supply of students are caused by growing demand and declining interest and early dropout. It will require a major and joint effort to turn the tide. The Greek example of televised promotion might be an idea for UK kitchen staff and Swedish electricians. However, if the sectors in question fail to retain their employees, it will be "mopping with an open tap".

Qualitative relevance

In the UK all three jobs scored about OK on tasks but well under the ability levels required. The assessment results on abilities suggest a significant mismatch between what is needed in the workplace (or what they are paid for) and what qualifications can provide. The OK task scores, on the

other hand, might suggest that the ability requirements are set too high or not recognised as important, over creative talent and experience, for example.

iVET programs proved to match the job requirements in general with room for improvement (of regarding the next three aspects.

a. Future job changes mentioned by both companies and schools
    1. *Changing rules and regulations (like EU legislation)*
    2. *Product innovation*
    3. *Technical innovation (like automation)*
    4. *Client attitudes and expectations*
b. Work and iVET attractivity
    1. *Changing work orientation/appreciation*
    2. *School leavers' attitudes and expectations (salary, working conditions and career options)*
    3. *Parents' attitudes and expectations*
c. Work placement volume and quality
    1. *Labour demand exceeds work placement supply by companies*
    2. *Companies have to pay a lot of attention to assessment and coaching in their trainees' need for feedback on practical performance.*

Apart from the UK, the ability scores of both companies and trainees/fresh graduates are generally well in line with the reference set by the companies and thus confirming the satisfaction expressed with the task scores and proving the relevance of the VET programs for the jobs concerned.

Classification and collaboration

It seems hard for a school to classify their programs against the ability levels set by the sector. Explanation might be that the soft skills are harder to develop than the hard skills and schools therefor are a bit (too) modest in their classification of soft skills as well as a bit pretentious in their scores on the hard skills.

Although there seems little reason to worry about the relevance of the VET programs for the jobs concerned, this last point, in particular, confirms the need for a dialogue between schools and companies that is still insufficiently conducted and proved hard to organize in this project.

The next three issues are clearly addressed to the agenda of encouraging collaboration between sectors and VET representatives.

1. Sector and VET marketing to close the quantitative gaps established.
2. Future program development to prevent qualitative gaps in the curricula
3. Work placement arrangements, to guarantee the educational capacity in practice and the commitment of the companies

C. Reflection on tools applied

Instrumentation was an important part of the project:

- A sector map as a clear frame of reference for jobs, careers, learning pathways and quantities of workers and students to match.

- Detailed job profiles providing a common vocabulary for craftsmanship as well as a touchstone for substantive VET quality and relevance.

1. Sector map

The simple sector maps proved to be relatively easy to draw and helpful in visualizing the occupational domain and put the jobs in their context. All stakeholders involved immediately recognized the image as completely self-evident.

Although well recognized and useful as a frame of reference, the sector map proved to be often hard to fill with corresponding VET programs. This seems to be mainly because there is not always a one-to-one relationship between professions and the corresponding iVET and cVET programs.

It proved to be even harder to fill with statistical information. The information wasn't available at the level of detail required. In the absence of the required data, it is difficult or impossible to quantify any deficits or surpluses and therefore the quantitative relevance of VET cannot be or proven. The sector map can only be filled with indicative values.

2. Occupational profiles

Creating the profiles did not cause any problems and their first drafts needed little adjustments. The result proved to be (very) well recognized by companies, schools and students. They proved to be more generic than expected. Their content turned out to be largely identical for companies varying in scale and character.

The companies highly appreciated the profiles not only as a clear and specific common job description but also suitable for job appraisal interviews and career planning. The schools appreciated them in addition to national qualifications and are to be used to discuss job contents, student performances as well as trends and developments with short term expectations regarding VET curricula and learning materials.

The profiles proved to be easy to convert to assessment forms, providing a touchstone for task performances and ability levels.

3. The assessment forms and questionnaires

The assessment forms were easier made than applied. The forms needed more explanation and instruction than expected for both interviewers and interviewees. They turned out to be especially hard to fill in for students by the lack of experience and reference. Their scores (though often well in line with the employers' results) must, therefore, be viewed critically.

The paper-based forms also proved to be a lot of work to fill in by the interviewees and to process by the researchers.

D. Reflections on the approach applied

The approach as such was much appreciated by all people involved.

Italy: Evident added value. Clarity in jobs for evaluation purposes as well as for career development

UK: Despite the 'crises' in the culinary sector (which made it hard to commit schools) the approach, its tools and activities "fell in fertile ground" and have good potential to be used in the near future. The approach aligns with current thinking in terms of closing the gap between VET and labour

demands and would add value to the implementation of external quality assurance by focussing on students' performances as well as to early age interventions in career counselling.

SE: Much appreciated by both the companies and schools for finding common ground in job requirements and VET qualifications and to explore (the impact of) changes.

As stated before, the implementation of this approach seems difficult "from outside" (UK, GR and SE) and relatively easy from a 'position within the sector' (IT). The approach clearly needs the explicit commitment of both sector and VET.

The sectors involved in the project are mature and stable. The question is to what extent the labour and education market is covered by these sectors and their associated VET programs. Change however often occurs at the edges of the discipline, in overlapping parts, in between or outside of existing sectors.

In addition to the approach applied in the project, dropouts and graduates who do not work in the jobs they're trained for should also be included in the surveys to investigate their satisfaction with the VET program attended.

E. Reflections on EQAVET indicators 5 and 6

In search of quality standards for evidence-based VET in relation to EQAVET (output) indicators 5 and 6, the project also leads to reflection on the two indicators themselves.

1. Reflections on indicator 5

Indicator 5 focusses on placement rate of students after completion of their program in two different perspectives.

Destination

Where do students end up one to three years after completion of their program? (Percentage of students that reach the intended job or further training versus other jobs and further training)

Employment

Do students have a job one to three years after completion? (Percentage of employed students versus unemployed)

iVET Schools in the countries involved seem to have a rough idea on where their students go, especially if they are employed by their former work placement companies but they have no obligation or instruments to monitor their students after dropping out or completing their training. In this time of privacy protection, it will be very difficult to set up a monitoring system to follow students for a longer period.

In the project, we interpreted indicator 5 as a quantitative balance of labour demand and VET supply, because it's not only a matter of offering employment for students in the jobs they are trained for but also supplying enough of them in the employers' perspective.

2. Reflections on indicator 6

Indicator 6 focusses on practical professional use of skills and competencies acquired in VET again from two perspectives:

Occupational information

Are the students satisfied with the job? Does it match their expectations based on prior information received before and during their training?

Satisfaction

Are students and companies satisfied with the skills and competences acquired in the VET program?

The project has paid no specific attention to the first aspect. The trainees and fresh graduates involved had -apart from their work placement- no or very little work experience to be able to make a comparison between previous occupational information and doing the job as an employee.

The project paid most of its attention to creating a common vocabulary on craftmanship to objectify the satisfaction to be determined. The extensive job descriptions proved to provide a well-recognized occupational standard, a practical assessment tool for professional performance as well as a clear-cut goal for VET programs. Satisfaction of employers, after all, not only concerns what students have learned, but also whether their education covers the jobs' skills and competences requirements.

3. Bycatch

In search of (the means for) providing evidence of VET relevance the project's approach not only supports EQAVET indicator 5 and 6 but also relates to indicator 9; Mechanisms to identify training needs in the labour market. A systematic application of the approach applied could well serve as an effective mechanism to keep the gap between labour demand and VET supply as close as possible.

F. Recommendations

1. General Recommendations

Establishing and improving the match between demand and supply in EQAVET 5 and 6 perspectives need a common vocabulary and a structure for collaborating stakeholders.

2. At National level

a. Address and support social partners regarding a clear articulation of their labour demands for the short and long term. Give them the lead in defining job requirements as a basis for qualifications
b. Create and support an (institutional) infrastructure with clear instructions, guidelines and formats for joint translation of job requirements and developments towards qualifications and targets by VET and labour representatives
c. Generate and communicate adequate statistical information to facilitate poly makers and VET programmers.
d. Create balance in responsibilities and control of VET and labour in policies and programs
e. Keep an open eye for new jobs, companies and potential new sectors be served too.

3. At sector level

a. Be as clear, specific, honest and up to date as possible on labour demands, job requirements and career perspectives
b. Create a network of companies committed to education issues to discuss educational issues and represent the sector.

c. Take the lead in setting the standards for craftsmanship and the dialogue with VET providers on qualifications and curricula.

4. At Regional level (of schools and companies)
   a. Make sure end term documents and curricula relate to and correspond with tasks to be performed, (work) results to be achieved and abilities to possess.
   b. Make active use of job profiles like this to support work placements and companies' assessments and evaluations
   c. Pay attention to innovation as a separate subject in curricula, (work placement) commissions and learning materials

G. Open issues

The project provides a lot of valuable and instructive experiences but also left a number of questions unanswered.

1. How to find/follow school leavers/graduates who are NOT working in the jobs/sector trained for?
2. In what frequency should surveys like this be conducted?
   a. Minimum = parallel to the duration of the VET programs concerned.
   b. Maximum = on an annual basis
3. How to share and discuss the findings with relevant stakeholders (other than the ones involved)?
   a. Policymakers
   b. VET programmers
   c. Sector organizations
   d. Companies
   e. Schools
   f. Students and their parents