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10 SKILLS REQUIREMENTS

The fieldwork conducted within ESSA WP4 has identified a list of 10 common skills needs that surfaced in the ESSA five case study countries (DE, ES, IT, PL, UK), which environmental/green skills cut across. This list offers an illustration of what industry representatives think VET programmes need to prioritise to support the industry. While some VET systems are already paying more attention to transversal skills (see ESSA D4.1 for more detailed information), the extent to which these are incorporated in the national programmes varies.

- ❖ Digital skills
- ❖ Communication and connectivity
- ❖ Teamwork
- ❖ Data analysis
- ❖ Metallurgical skills
- ❖ Problem solving and critical thinking
- ❖ Adaptation
- ❖ Advanced engineering
- ❖ IT skills
- ❖ Process/system knowledge

VET in the ESSA case study countries

Skills mismatches are being addressed in all the case study countries through a more direct engagement of social partners (especially employers) in VET provision and in the existing feedback mechanisms.
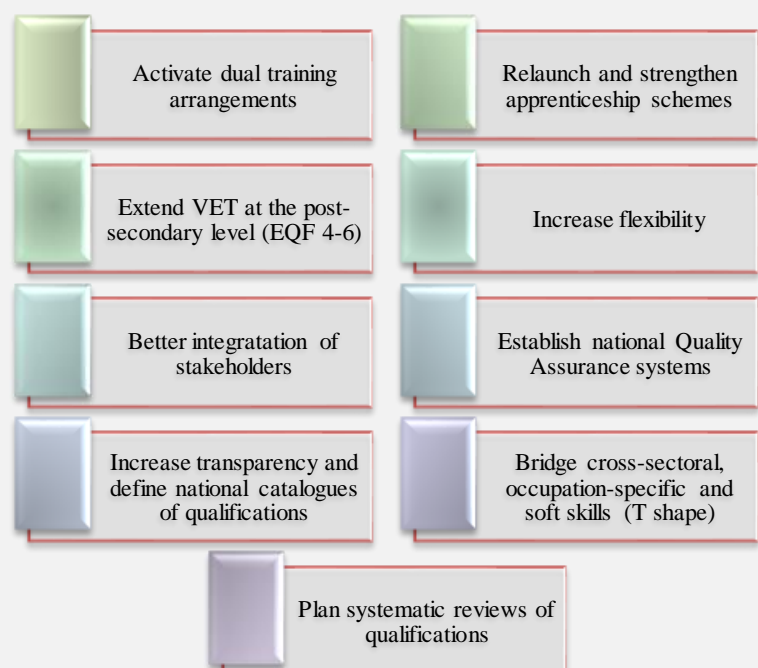
Recent reforms in all the countries have introduced, where not already established, elements of dual apprenticeship schemes, with the aim to shorten the distance between formal training and workplace-relevant skills acquired directly on the shop floor.

Permeability and flexibility of the paths have been enhanced through better connecting IVET with CVET and higher education.

IVET programmes appear to increasingly incorporate transversal skills. A transversal skills component is present in most of the vocational curricula reviewed, although the extent of this varies by country.

Systematic reviews of vocational qualifications are needed to ensure that contents are up-to-date and vocational profiles are still relevant for the labour market. This is particularly important considering the accelerating pace of technological change and the pressure to decarbonize operations.

Most common VET reforms identified by ESSA

Activate dual training arrangements

Relaunch and strengthen apprenticeship schemes

Extend VET at the post-secondary level (EQF 4-6)

Increase flexibility

Better integratation of stakeholders

Establish national Quality Assurance systems

Increase transparency and define national catalogues of qualifications

Bridge cross-sectoral, occupation-specific and soft skills (T shape)

Plan systematic reviews of qualifications

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EXPERTS SAY:

"Until now, much has been built on a mode that was particularly linked to a specialisation model that saw the fragmentation of skills, knowledge and the figures themselves. Recomposing this, also from the point of view of the overall ability to know the production process, is one of the issues on which there is a stronger demand"
(Trade Union rep, IT)

"Back in the day, apprentices were referred to as *Ausgelernte* which literally means 'someone who has completed their learning'. Nowadays, apprentices are referred to as *Ausgebildete* which means 'someone who has been trained'. The term *augelernt* suggest that you are done, finished learning [...] Today, an apprenticeship is just your 'initial qualification', one that will be added to over the course of your working life"
(HR manager, DE).

"Technical progress and process automation require employees to learn and improve their qualifications practically continuously throughout their professional career [...] the employer will expect employees to have the skills to continuously improve their professional qualifications"
(HR Officer, PL).

Technological development is producing more complex and integrated (both horizontally and vertically) workplaces. The need for a stronger process and system knowledge was one of the most common remarks from the case study research. There is an urgent need to overcome the parceling out of competencies and embrace a more holistic approach to occupational training.

Vocational qualifications are strengthened when coupled with actual work experience. In-company training, in the form of placements or dual apprenticeships, can help to tailor skills and competencies to the industrial environment that is specific of a sector or a company, remedying to scarce sector customization at the IVET level.

Completing IVET and obtaining a vocational qualification can no longer be considered the final goal, rather it is the first step in a lifelong commitment to learning. The pace and scale of change across workplaces requires systematic upskilling (or re-skilling).

Employers' participation in the design of initial training and upskilling is important, but allowing them to have a central role without including the workers' representatives could lead to a proliferation of narrower programmes and occupational standards.

Evidence from industry stakeholders identifies that the goal of IVET is to provide cultural advantage, generate knowledge and competencies, and foster ideas. Thus, whilst in-company experience is recognised as important, where curricula are too much tailored towards sector or company needs it might cause a diminishment of the innovative potential of prospective workers. This applies particularly to technical roles involved in departments that thrive on innovation, but also has wider implications.

With regard to VET, there are somewhat divergent interests that need to be addressed. There is often a tension between company needs, workers' aspirations, and governments' ambitions reflected in VET. Companies often remarked on the need for more specialised training in metallurgy and steelmaking. However, IVET as a societal institution is expected to produce knowledge, skills and competencies needed to act in different domains of society. Finding the right balance through a better coordination of all parts could be the key challenge in the coming years.

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IMPLEMENTATION OF THE EU FRAMEWORKS

EQF is present in all the ESSA case study countries and National Qualifications Frameworks are referenced to it, except in Spain where the referencing process is still underway.

ECVET appears to be the most challenging framework to adopt at the national level. Where ECVET principles are used, this is mainly to promote and support transnational mobility, to ensure a quality experience for the learner/worker and the recognition/validation of their learning.

Quality Assurance mechanisms in line with EQAVET are present in all the ESSA case studies. However, it is difficult to frame a national QA system as a whole since measures and mechanisms are implemented at different levels (national, regional, local).

DigComp is used in the ESSA case study countries, although in different ways. It varies from being used as a reference for national digital competencies standards to being used to pilot initiatives at the regional/local level.

All the ESSA countries have adopted a learning outcomes approach. Poland and the United Kingdom have been classified as early developers of such an approach, whereas Germany, Italy and Spain are more recent developers.

Modularisation is mostly applied in the ESSA case study countries, however, in Italy and Germany it is applied to a lesser extent (only for some qualifications or part of them).

In the summary table below, yellow means that steps have been taken towards alignment and implementation at the national level in the ESSA case study countries, but not to an operational state, while green means that the tool/concept/framework is present and operational to some extent.

	Germany	Italy	Spain	Poland	United Kingdom
EQF	🟢	🟢	🟡	🟢	🟢
ECVET	🟡	🟡	🟡	🟡	🟡
EQAVET	🟢	🟢	🟢	🟢	🟢
DigComp	🟢	🟢	🟢	🟢	🟢
Learning Outcomes	🟢	🟢	🟢	🟢	🟢
Modularity	🟡	🟡	🟢	🟢	🟢
Validation of non-Formal/Informal Learning	🟢	🟢	🟢	🟢	🟢