VETNET
European Research Network
Vocational Education and Training

Klein, I., Saniter, A., Tütlys, V., Piro, J., Spata. S., & Spinelli, P. (2021). Good practices and methodological approaches in supporting competence development of WBL trainers and tutors in European countries. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. IV. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 150–159). https://doi.org/10.5281/zenodo.5416421

# Good Practices and Methodological Approaches in Supporting Competence Development of WBL Trainers and Tutors in European Countries

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## Abstract

Context: There are different practices and experiences of work-based learning (WBL) and training of trainers (ToT) in the member states of the EU. Moreover, work is changing; new skills are demanded and have to be acquired related to the application of Industry4.0 technologies (AI, cyber-physical-systems, VR, Big Data etc.). The main aim of the Erasmus+ Project "STEP -UP Supporting Tutors Educational Profile" is improving continuing professional development of in-company trainers and tutors engaged in WBL practices in this changing work environment.
Approach: In first part of the study (IO1) comparison of the relevant aspects of the VET systems of the countries Spain, Germany, Italy and Lithuania. Analysis of the strength, weaknesses, opportunities and threats (SWOT) of the existing institutional mechanisms and apparent good practices in WBL and methodological approaches for supporting on support of WBL tutors and trainers working in digitalized work processes competence development in the involved countries. The roles of trainers and their competence requirements were researched by applying content analysis of the different competence profiles and occupational standards.
Findings: The study revealed: In all four countries work-based learning (WBL) is seen as a promising approach of closing the gap between school-based VET-programmes and labour market needs. However, 3 in 4 countries are still developing their approaches on WBL in form of an established dual system. There are differences regarding the involvement of stakeholders, funding schemes and quality standards.

Conclusion: The main structure of WBL was identified. Establishing a sustainable dual system, anchored quality standards, legislation and funding are still goals to achieve. Regarding the role of teachers and trainers the study points out that there is still the need of enhancing technical and pedagogical competences as well as innovative approaches for the training of trainers and tutors. This will be subject of part two of the study: developing ToT modules enhancing teachers and trainers' competences in the field of pedagogy and digitalization.

**Keywords**

training of trainers, skill development, digital skills, youth at risk, work-based learning

## 1 Context

With the expansion of apprenticeship, work-based learning (WBL) and other dual education schemes supported by EU initiatives like the European Alliance for Apprenticeships (EAfA) and by reforms of national Technical Vocational Education and Training (TVET) systems promoted in many EU Member States, more companies need support to ensure the development and improvement of the new digital skills of potential trainers (paid for training) and tutors (mainly paid for work). Improving continuing professional development of in-company trainers and tutors has been on the EU policy agenda for some years but it becomes now even more important in the context of the increased policy attention (EC 2010-2012, Teachers and Training Matter EC 2018). This is why the current study, undertaken in the framework of the Erasmus+ Project "STEP -UP Supporting Tutors Educational Profile" executed a comparative analysis of apparent good practices and methodological approaches of supporting WBL tutors working in digitalized work processes implemented in Italy, Germany, Spain and Lithuania. It involves a selection of good practices of technical and pedagogical competences and innovative approaches for the training of trainers and tutors engaged in WBL practices.

Based on the assumption that there is a direct link between the effectiveness of WBL schemes and the pedagogical skills detained by all the different professionals involved in the planning, performance, follow up and evaluation of these paths, issues surround the development of pedagogical skills for in-company trainers in order to be adequately equipped for new digitalized or expanded roles seem to be particularly important. Not only creates the digitalization of work processes specific demand of the professional and general skills and competences for trainers (Lee & Pfeiffer, 2019; Pfeifer, 2017; Spöttl et al., 2016; Spöttl & Windelband, 2019), but these new skill demands concern a) professional skills and competences related to the application of the Industry4.0 technologies (AI, cyber-physical-systems, VR, Big Data etc.), and b) a demand of new pedagogical skills and competences related to the innovative and digitalized pedagogical techniques (Brown et al., 2018; Hirsch-Kreinsen, Itterman 2019; Zinke et al., 2017). The roles of trainers change, because now they have to cooperate closely with the engineering and production staff of the companies as well as with vocational education and training providers and teachers to guide apprentices in the digitalized work environment.

Unfortunately, the development of pedagogical skills for in-company trainers is still rather marginalized and fragmented in most of the involved countries, despite of the increasing attention of VET policy makers for the implementation and development of WBL and apprenticeships. Continuing professional development often seems to be a neglected area for both teachers and in-company trainers. This aspect is a great challenge for quality in apprenticeships in terms of the cost for both public sector and enterprises of ensuring the supply of sufficiently competent teachers and trainers. Therefore, the training and competence development of the WBL trainers in the conditions of digitalization of the work processes requires a systemic and holistic approach to their competences focused on the all fields of WBL (from curriculum design and planning to competence assessment) and supported by mutual and regular feedback

mechanisms. This is why our comparative study (Saniter et al., 2020) focuses on the following aspects to support WBL trainers:

- **main structures of WBL in partner countries**: aims, learning venues, alternation, and cooperation, stakeholders involved and their main tasks, funding and juridical issues, structures of curricula, examinations, approaches, involvement of research in development of the system,
- **trainer/tutor training:** how are trainers/tutors chosen, level of trainer/tutor training, quality standards/assessment,
- **digitalized work and learning stations:** learning potentials and tutoring activities, examples of apparent good practices of reacting within training of trainers/tutors on challenges induced by digitalization.

This paper highlights only the most interesting issues of the first two aspects.

## 2 Methods

The research methodology is based on a comparative analysis and an analysis of the strength, weaknesses, opportunities and threats (SWOT) of the existing institutional mechanisms and apparent good practices in WBL and on support of WBL trainer competence development in Spain, Germany, Italy and Lithuania. This support was analysed in the context of implemented VET reforms in the involved countries which target on the development of competence-based VET curricula and promotion of apprenticeship and WBL in school-based VET systems.
There were applied different research methods:
Comparison of the relevant aspects of the VET systems of the countries was based on desk research of the literature and content analysis of the policy documents, as well as analysis of available statistical data.
Case study method was used for the analysis of apparent good practices of training in the enterprises of the involved countries. The roles of trainers and their competence requirements were researched by applying content analysis of the different competence profiles and occupational standards.

## 3 Findings

### 3.1 Remarkable Differences

In all four countries work-based learning (WBL) is seen as a promising approach of closing the gap between school-based VET-programmes and labour market needs; to “bring the student closer to the workplace” (Saniter et al., 2020, p. 9).
But Germany is the only country where WBL in form of the dual system is established, the other three countries are still developing their approaches or are experimenting. In Germany the dual system is established in all regions, sectors (except: health care, education and science-assistants due to historic reasons) and with standard stakeholders. Lithuania has chosen a comparable approach for reforming IVET. On the other hand, Italy and Spain are experimenting with various types of WBL, e.g. the division between VET-system and VET for employment (and each with many sub-types) in Spain. Additionally, in both countries VET is (due to the federal structure) part of the duties of the regions; engagement for WBL depends strongly on the federal governments.
All countries combine three learning venues: work-processes in a company, workshops and classes. Partly (but not systematically) two of these venues are at one place: often VET-school and workshop are combined to a VET-centre or huge German companies run own workshops on their premises as part of their training department.
Regarding the involved stakeholders, it is remarkable that only Spain and Germany refer to learners (apprentices/VET-students). They, as actors, must apply for a WBL VET-programme;

whilst in Lithuania and Italy these programmes are seen as part of the (state-driven) educational system and thus learners more as objects than as subjects. Another remarkable difference is the role of the state (whether on regional or national level): in Germany public bodies are only in charge of the framework of work-based learning; in the other three countries the state or regional institutions play a much bigger role; e.g. in curricula design, examinations or funding (see also below). Or, to put it different, the role of the social partners: in Germany they are responsible for curricula design and examinations – trade unions are not even mentioned as relevant actors in the national reports of the other three countries.

Funding schemes depict very clear the differences between countries with established and developing WBL-schemes: whilst for Lithuania, Spain and Italy a clear prevalence of public funding has to be stated, only in Germany companies invest substantially in WBL-VET (the dual system). They do not do so because they are "different to" or "better than" companies from other countries – but as this is the only way to recruit skilled future work-forces – as there are no other (public) IVET-providers that are offering these skills to the next generation.

Differing from the situation ~10 years ago, all countries established regulations on issues like contracting, insurance, assessment, etc. for WBL. But, again, only in Lithuania and Germany on national level; whilst in Italy and Spain this task is (mainly) delegated to regional authorities.

And again, juridical issues depict the main approaches/beliefs of the partner countries; as an example, might the age restrictions in Italy serve: apprenticeship, as part of the state duty "IVET" is restricted to people at the age of 15-25 or 18-29 – whilst a German employer is free to hire an apprentice aged 50 years – with the same conditions as another apprentice aged 20.

In Germany quality standards are set by the community of practice; delegates from employer's organisations and trade unions are in charge of defining curricula, assessment methods and performing the examinations. On the one hand, this approach assures a high level of standards; on the other hand, it is (partly) excluding colleagues with unusual career pathways or new training approaches. In the other three countries minimum standards are set by public bodies (or not even that) – and rather pragmatic indicators are chosen, like in Spain: quality refers to impact "in terms of insertion of unemployed workers into a job related to the training received" (Saniter et al., 2020, p. 21).

All four countries are working on increasing the flexibility of their VET-systems, but approaches differs largely: Lithuania modularised it's VET system, Germany still sticks to "vocational principle" (Saniter et al., 2020, p. 25) but allows companies to vary time spent on the different spheres of activity according to their core-business, Spain sets nation-wide minimum standards to be adapted by each region according to local needs and Italy even works with "individual training plans (PFI)" (Saniter et al. 2020, p. 25), taking prior learning into account.

Increased flexibility of VET-programmes is for sure a need due to technological changes, work-share between companies, etc. – but it should be always kept in mind that tailor-made skilled workers are only up-to-date for a certain moment in time; broad basic knowledge and skills of skilled workers are a mandatory precondition for being prepared for upcoming technological changes.

An encouraging finding is that in all four countries research is involved in the development of VET-systems. Not encouraging is that research is often or even mainly undertaken by national agencies / ministerial departments, being often not free in choosing the research topics and sometimes not even the results; if the clear expectation is to deliver evidence that a certain educational reform was a success. Even in Germany, where many universities are researching in VET, the competent body (BIBB) often sells itself as the only legitimate research body. A positive exemption is Spain, where in last decades a couple of independent research centres emerged (e. g. at the universities of Barcelona, Tarragona and Valencia) as there is no ministerial department for VET research.

Numbers of learners in dual VET (sub-system) are for Lithuania, Italy and Germany quite in-line with the findings from the previous analyses: Very low (~300) in Lithuania as dual VET is still in very early piloting phase. A substantial amount in Italy of 428,933 (2017) in dual programmes; even with respect to the size of the country a remarkable amount as dual programmes are not the standard IVET-approach. In Germany ~500.000 apprentices start each year; as most programmes last 3 year approx. 1.5 million people are in dual programmes – the standard and most popular IVET programmes. Remarkable are the figures for Spain: between 3.7 and 4.7 million beneficiaries in the VET for employment system; but here it must be considered that many programmes are rather short (re-)trainings.
Remarkable is that the questions formulated for the training of trainers could be answered only in Spain and Germany; in the other two countries either no institutionalized provision of initial training of VET trainers exists (Lithuania) – or too many approaches, where each region or VET-provider sets its own standards (Italy). Regarding the question, by whom trainers and mentors are chosen, in Spain as well as in Germany the company is the main actor; human resource departments ask/encourage colleagues to take this role. Only for German trainers a mandatory curriculum exists (but a rather short programme of ~2 weeks full-time, focussing on rights and responsibilities, not on didactics); preparing and supporting German mentors and Spanish trainers and mentors is up to regional or company-driven initiatives.

### 3.2 SWOT

The relevance and institutionalisation of work-based learning in the form of a dual system, ***Germany*** can be considered as apparent good practice. Companies and other stakeholders are highly committed to the system, roles and share of responsibilities between involved institutions are clearly negotiated and stable over a long period of time.
On the other hand, this established corporatist approach led to a certain inertness; in case of new developments, stakeholders tend to defend their claims instead of being open for new needs. A negative example was the 3rd industrial revolution: social partners, federal states, BIBB and others needed years to develop vocations for IT-sector (until 1997); private providers like big IT companies were much faster.

| STRENGTHS | WEAKNESSES |
|---|---|
| Vocational principle: Nation-wide recognised qualifications. | Market-driven: In times of economic crises companies reduce the amount of apprentices. |
| The dual system as such; it assures accountability and commitment of companies as well as a balance between general and specific knowledge, skills and competences (KSC). | High number of youngsters in the substitute system. |
| Good image of VET. | Mentors (skilled workers) not prepared for training. |
| Involvement of all stakeholders. | Low permeability to higher education (HE). |
| Strong CVET system. | |
| Internal flexibility of VET-profiles. | |
| Holistic approach: apprentices learn about all relevant aspects of a profession and therefore can development necessary competences. | |

| OPPORTUNITIES | THREATS |
|---|---|
| Transfer of KSC from companies to schools and vice versa.<br><br>Trend of bridging the gap between VET and HE.<br><br>Integration of new technologies into existing VET-profiles.<br><br>Digital media for new learning environments. | Still: Some voices that support modularisation.<br><br>Academic drift.<br><br>International companies that do not accept the role of companies in DE VET system.<br><br>Opening scissors: digitalisation might have the effect of more need of CVET (EQF level 5 or 6) and semi-skilled workers (EQF level 3) – and less skilled work on EQF level 4. |

Training and continuing professional development of work-based learning trainers in ***Lithuania*** is defined by the following main factors:

| STRENGTHS | WEAKNESSES |
|---|---|
| Created infrastructure for work-based learning in the different sectors of economy-sectoral practical training centres.<br><br>Strong network of the VET schools and centres with high capacities of VET teachers.<br><br>VET curricula are based on the occupational standards developed by analysing work processes. | Domination of the school-based VET provision and undeveloped work-based learning and apprenticeship practice define comparatively peripheral role of trainers in the VET provision. Traditionally trainers are treated as supervisors of short-term practical training in the enterprises delegated by the management and with the domination of administrative and organizational responsibilities. Slow and cumbersome implementation of the dual apprenticeship started in 2007 can change this situation with the increasing share of the work-based learning.<br><br>Low activity of social partnership and social dialogue in the field of VET, what limits the potential for development of pedagogical and professional skills and competencies for VET trainers.<br><br>Absent institutionalized provision of the initial training for trainers remains a weakness and significant obstacle for systemic and sustainable preparation of trainers. |
| **OPPORTUNITIES** | **THREATS** |
| The engagement of employers in the field of VET (design of occupational standards and qualifications, VET curriculum design, organisation of practical training and apprenticeship, assessment of competencies) is gradually but steadily increasing (opportunity for development of training of trainers), while trade unions remain rather isolated from these processes.<br><br>Institutional change of the VET provision with stronger orientation to development of apprenticeship and work-based learning leads to the establishment of the | Lack of skilled and experienced trainers in the enterprises.<br><br>Lack of the culture and practices of cooperation between the companies and enterprises in the provision of apprenticeship and work-based learning.<br><br>Increasing domination of employers without involvement of trade unions in the WBL and apprenticeship can lead to the low-quality standards of training. |

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|---|---|
| new places for practical learning and training (sectoral practical training centres), opening the governance of the public VET providers for external stakeholders (change of the legal status of the VET providers) and introduction of the dual apprenticeship as alternative pathway of VET provision in the legal regulations. All these trends create new opportunities for the training of VET trainers in the future. These factors tend to increase the demand of skilled trainers, especially for work in the sectoral practical training centres.<br><br>Development of qualifications of the VET teaching staff, including trainers, especially with the approval of the occupational standard of education and library sectors in the 2019, which includes qualifications of VET teachers (EQF level 5 and 6) and trainer (EQF level 5). It opens the opportunities for implementation of the initial training programmes for training of trainers. | |

SWOT analysis ***Italy:***

| STRENGTHS | WEAKNESSES |
|---|---|
| IVET system as a winning choice against early school leaving.<br><br>The Dual system contributing to the further development of this training offer.<br><br>New resources capable of expanding the offer on the territory constitutes.<br><br>Development of innovative strategies to increase flexibility of the didactic organization and personalize the training courses.<br><br>New impulses for the development of career guidance and job placement systems. | The quality of in-company training is the focus of attention.<br><br>It is often difficult to adapt the training management of apprentices to the work processes and company organisation, especially in case of unforeseen events during the contract.<br><br>In-company training is generally aligned to the needs of the individual company, rather than to the local labour market or sector.<br><br>The most common mode of delivery is "on-the-job training under supervision"; as a result, apprentices in micro and small enterprises generally find it difficult to distinguish between training and ordinary work.<br><br>The SMEs may not be able to develop the full spectrum of technical skills foreseen in the individual training plan, and even the training institution may not be able to cover them all, with the consequent risk of gaps in expected learning outcomes.<br><br>Education and training institutions face an excessive burden in designing and implementing apprenticeship pathways of this kind, particularly when the employer is a micro or small enterprise, or when cooperation between companies and training institutions is not sufficiently stable and robust. |
| OPPORTUNITIES | THREATS |

| | |
|---|---|
| Transfer of knowledge from the company to the school and vice versa.<br><br>Creation of Academies together with Companies and Technical Schools<br><br>Recognition of the training of workers within the company by educational centres in certain VET studies.<br><br>Promote the ToT system.<br><br>Create opportunities in new sectors. | School and VET Teachers Skills obsolescence.<br><br>Decreased role of Professional Workshops within VET centres.<br><br>Schizophrenic learning (this focused on specific needs highlighted by companies and less on transferable skills). |

SWOT analysis ***Spain:***

| STRENGTHS | WEAKNESSES |
|---|---|
| Increase of students in Higher VET and online VET studies.<br><br>Promotion of the VET studies from public institutions.<br><br>Companies see an opportunity to create a career for future workers through VET and Dual VET studies.<br><br>The companies have begun to value the qualifications of the students of VET and above all Dual VET to do jobs that require direct and practical contact with certain technologies (robotics, 3D printers, artificial vision cameras ...). | There are no tax incentives for companies to train their own workers.<br><br>Most of the Spanish companies are SMEs.<br><br>Different regulations in each region of the country.<br><br>Need for a specific employment contract for Dual VET, the current "Training and Learning" contract is difficult to adapt to the company.<br><br>For years the curricula have not been adapted to the new needs (there are no modules on Artificial Intelligence, on Virtual Reality, etc.).<br><br>The curriculum should be less incomprehensive and should be updated more frequently.<br><br>VET centres must have more pedagogical autonomy to incorporate curricula adapted to the needs and reality of the place where they are located.<br><br>Lack of teaching means to work with students with special needs.<br><br>Need for training in new technologies for teachers.<br><br>No nationwide curricula or training for mentors and trainers. |
| **OPPORTUNITIES** | **THREATS** |
| Transfer of knowledge from the company to the school and vice versa.<br><br>Possibility of transferring new technology (robots, artificial vision cameras, etc.…) to schools, that are due to the high costs not able to compete. | Changes of educational laws too often.<br><br>The constant and rapid technological changes in industry 4.0 can cause that teaching of knowledge is outdated if the company does not adapt to them. |

| | |
|---|---|
| Enhance that experts from the business sector participate in teaching activities in the classrooms. | We are realizing that it would be interesting to have 3 years Dual VET courses to carry out the curriculum in the educational centre and the 1,000 hours of Dual training because the 2 years courses are very stressful for the students. |
| Creation of research and innovation centres in the VET system with involvement of centres, companies and administrations. | Little interest of the students and little training offer in very manual works that cannot be replaced with technology. Example: in the case of TEMSA, the final polishing phase of the dies and the punches is manual and there is no way to automate this last phase of the process. In the department the average age is 55 years, what will happen when the polishers retire? |
| Create opportunities for teachers of schools to expend time in companies so that they know the technological innovations and the place where the students are trained. To do this, the Education Administration would have to replace these teachers during the time that they are in the company. | |
| Promote at the local level technological centres financed by public funds and SMEs where the companies can train their workers as well as use their technology to develop prototypes or manufacture products. | |
| Recognition of the training of workers within the company by educational centres in certain VET studies. Example: Celsa - SVH: Celsa workers validate part of the internal training in the company with the curriculum of mechanical VET studies (intermediate VET) in SVH school. | |
| Promote the ToT system. | |
| Give support to schools. | |
| Create opportunities in new sectors. | |

## 4 Conclusions

The findings mirror very well the elements of the national reports/conclusions drawn from the comparison: in our four countries, dual approaches in VET are more or less established/appreciated. But independent of the status of dual VET in the countries, in-company mentors, and partially also trainers, are a weak link in providing dual VET.

Analysis of the cases of good practices of training of WBL trainers and tutors in the project partner countries disclosed that there is a significant gap of systemic and comprehensive assistance and support in the development of trainers' and tutors' skills and competences needed for working and training in digitalized workplaces. Most of the existing practices are based on short-term projects funded by different national and EU programmes and involving VET providers, enterprises and social partners. Target of most projects is the development of professional and didactic competences of VET trainers and tutors in specific industrial sectors and occupations, especially those, which show particular progress in the implementation and development of the Industry 4.0 technologies and digitalization of the workplaces.

One of the particular challenges in supporting WBL trainers in developing their professional and pedagogical competences for work and training, especially with respect to digitalization, is the lack of systemic institutional infrastructure and study/training programmes in this field. Weak institutionalisation and fragmented provision of training of WBL trainers present particular difficulties and challenges for the successful preparation of WBL trainers for high-quality training. The most relevant issue seems to be the developing of sustainable train the trainer modules in the fields of enhancing pedagogical skills, transversal competences,

competences needed for teaching in digitalised workplaces and training with remote learning activities.

## References

Brown, P., Lloyd, C., & Souto-Otero, M. (2018), *The prospects for skills and employment in an age of digital disruption: A cautionary note. Research Paper No. 127.* Skope.

Hirsch-Kreinsen, H., & Itterman, P. (2019), Drei Thesen zu Arbeit und Qualifikation in Industrie 4.0. In G. Spöttl & L. Windelband (Eds.), *Industrie 4.0 – Risiken und Chancen für die Berufsbildung* (pp. 151-170). Bertelsmann.

Lee, H. & Pfeiffer, S. (2019), Industrie 4.0 – Szenarios zur Facharbeiterqualifizierung und ihrer betrieblichen Gestaltung. In G. Spöttl & L. Windelband (Eds.), *Industrie 4.0 – Risiken und Chancen für die Berufsbildung* (pp. 171-186). Bertelsmann.

Pfeiffer, S. (2017), Work 4.0 – New challenges for participation and qualification. In F. Kaiser, & S. Krugman (Eds.), *Social Dimension and Participation in Vocational Education and Training* (pp. 30-34). Proceedings of the 2nd conference "Crossing Boundaries in VET, University of Rostock.

Saniter, A., Harberts, V., Tütlys, V., Piro, J., Spata, S. & Spinelli, P. (2020), *Comparative study on work-based-learning (WBL) and training of trainers (ToT) in Spain, Germany, Lithuania and Italy.* http://stepup.cnos-fap.net/files/2020/11/STEP_UP_IO1_report_comp_A.pdf

Spöttl, G., Gorldt, C., Windelband, L., Grantz, T., & Richter, T. (2016), *Industrie 4.0 – Auswirkungen auf Aus- und Weiterbildung in der M+E Industrie.* Bayme vbm.

Spöttl, G., & Windelband, L. (2019), Industrie 4.0 – Neugestaltung industrieller Prozesse und Konsequenzen für die Berufsausbildung. In G. Spöttl & L. Windelband (Eds.), *Industrie 4.0 – Risiken und Chancen für die Berufsbildung* (pp. 239-254). Bertelsmann.

Zinke, G., Renger, P., Feirer, S., & Padur, T. (2017), *Berufsausbildung und Digitalisierung – ein Beispiel aus der Automobilindustrie. Heft-Nr. 186.* BIBB.

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