



Implementation Scenarios Quality Standards Professional Driver Training Germany



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Standard 1: Embedding directive 2003/59/EC into national VET systems

The implementation of directive 2003/59/EC is interconnected with and embedded into the national vocational education and training systems of the participating countries.

The initial professional driver qualification required by directive 2003/59/EC is integral element of the formal IVET programme/qualification "BerufskraftfahrerIn" (professional driver) in Germany. But only a minor percentage of drivers already carrying out the profession or entering into the profession participate(d) in this formal IVET apprenticeship scheme "BerufskraftfahrerIn" that lasts for 3 years and applies the dual system approach integrating company- and school-based training. The majority of professional drivers entering into the profession acquire the necessary initial training certificate through the participation in an accelerated initial training to obtain the driver CPC instead. These courses have so far no direct interrelation with the German formal initial vocational education and training system, but examination and overall supervision of the realisation is implemented by the same competent bodies in Germany. It can therefore be claimed that interfaces have already been established between the German initial vocational education and training system and the implementation of directive 2003/59/EC, but this already existing interface is only applicable for a minor number of new drivers entering into the profession and does not meet the requirements as defined in the ProfDRV quality standards.

Driver CPC being only rudimentary interconnected with the German vocational education and training system

A major step in order to implement the ProfDRV quality standards would be the referencing of the different IVET (CPC and formal IVET scheme) opportunities to the just launched German Qualifications Framework (GQF). A precondition for referencing is the description of the different certificates in terms of learning outcomes in accordance with the GQF or alternatively the EQF. Such a description is so far neither available for the "BerufskraftfahrerIn"-qualification nor for the driver CPC as implemented in Germany. However, the ProfDRV core profile for professional drivers (freight transport) that is based on the actual tasks of professional drivers in Europe offers such a description in terms of learning outcomes based on the EQF as a reference. It can be claimed that this profile has strong interrelations to the German formal IVET scheme "BerufskraftfahrerIn" but goes far beyond the initial qualification

Necessity to describe driver CPC and formal IVET scheme "Berufskraftfahrer/in" in terms of G/EQF learning outcomes ideally in terms of the GQF descriptors "knowledge", "skills", "social competence" and "autonomy"

ProfDRV core profile allows first referencing attempts to the GQF and suggests referencing to level 4 in the case of the "BerufskraftfahrerIn" and level 1 or 2 for the driver CPC

based on directive 2003/59/EC / the driver CPC¹. Based on this profile, the German formal IVET scheme "BerufskraftfahrerIn" would allow a referencing to GQF-level 4 under consideration of the German level descriptions. The initial qualification/ CPC is also not yet described in terms of learning outcomes. The ProfDRV interview results with regard to the abilities of CPC holders suggest a referencing to level 1 or more likely 2². A first step in order to enable referencing to the GQR should, therefore, be the description of the "BerufskraftfahrerIn" qualification and of the driver CPC as implemented in Germany in terms of the GQR descriptors "knowledge", "skills", "social competence" and "autonomy". The ProfDRV profile could facilitate the realisation of these descriptions.

On this basis (GQF references and learning outcomes description) also an upgrading from the driver CPC to the "BerufskraftfahrerIn" qualification is imaginable in order to reach a skilled worker qualification level. This can be realised for instance through the application of ECVET credits to be accumulated on top of the driver CPC through additional training and/or recognition of prior/ non-/informal learning. This would require the further differentiation of the "BerufskraftfahrerIn" qualification in units, one or more of them being the driver CPC. Furthermore the "Externenprüfung" (external examination) as possibility for experienced workers in Germany to obtain a skilled worker certificate can play a major role in this process and in order to facilitate the possibility to upgrade the driver CPC certificate to the German skills worker certificate "BerufskraftfahrerIn".

But also the already mandatory continuous/ periodic training should be taken into consideration in the context of such attempts to upgrade the qualification of drivers from the CPC to a skilled worker certificate. So far periodic training is limited to five more or less fixed modules that need to be repeated every 5 years under consideration of changes in legislation and technique. A more flexible approach to periodic training – opening up the overall scope of topics to be covered such as practiced in the UK, the Netherlands or Denmark – could for instance support preparation for the external examination alongside regular work over several years. A further flexibilisation of the current periodic training approach to limit the eligible training to 5 specific courses can also contribute to further aspects of the quality standards such as the recognition of in-company training as periodic training, periodic training as possible contribution to further training such as to preparing for the certificate "Geprüfte/r MeisterIn Kraftverkehr" (industrial master road traffic) or the embedding of training that is governed by other areas of legislation into periodic training such as the ADR certificate.

However, the original approach of ensuring road safety and rationalisation of fuel consumption through the participation within periodic training may not be diluted. An approach that combines compulsory and facultative elements should, therefore, be further investigated and underpinned by additional research on necessary repetition of training contents such as with regard to eco-driving in order to consider different interests and needs in the context of periodic professional driver training.

Upgrading drivers qualification from driver CPC to "BerufskraftfahrerIn" supported through the ECVET-approach, the "Externenprüfung" and periodic training

Flexibilisation of periodic training in order to facilitate upgrading of professional drivers CPC qualification to a skilled worker certificate, facilitate access to related further VET certificates such as "Geprüfte/r MeisterIn Kraftverkehr", recognise in-company training and embed training governed by other legislation into periodic training as already practiced in other countries.

Further investigation of a periodic training approach combining mandatory and facultative training should be further explored under consideration of best practice from other countries and relevant VET research.

¹ Please note: a formal comparison is in both cases not possible because of missing learning outcomes descriptions for both certificates!

² Please note: further research and analysis work is needed in order to underpin this first estimation.

Standard 2: Entry requirements for initial driver training

Professional driving is perceived as an occupation that requires certain life abilities and affinities before entering into initial training for professional drivers and therefore before entering into the profession as such. It is considered as an occupation that cannot be performed by anybody.

Information campaigns and measures are implemented all over Germany in order to recruit young people but also job changers for professional driving especially during the last years with an increasing driver shortage. These campaigns primarily address young people during their career choice and include typical campaigning approaches incl. flyers, announcements in journals but also representations on career fairs for young people and their parents. It is tried to present professional driving as a skilled work that requires training and cannot be implemented by anybody in the framework of these campaigns. This is done by for instance highlighting the contents of the apprenticeship but also the life abilities, affinities and responsible behaviour somebody should have in order to enter into an apprenticeship as professional driver. They are primarily implemented by carriers, transport associations, but also publishers play a major role here and try to support the recruitment of young people for professional driving with special activities such as the introduction of young drivers and their reasons for this career choice in driver journals.

Recruitment campaigns addressing especially young people during career choice are implemented by different stakeholders but suffer from the occupations bad image

However, all these campaigns suffer from the very bad image of professional driving and the low reputation of this occupation in Germany. Recruitment of young people could therefore strongly benefit from broader image campaigns/ measures in order to raise the awareness of a wider public for professional driving as a skill intensive and demanding, responsible and important career for economy and everyday life. Also the information of teachers in high schools and of career counsellors about the reality of professional driving and their equipment with information material that illustrates a realistic picture from profession driving incl. the abilities a candidate should already bring in before starting any kind of training as well as a longer term perspectives of professional drivers in terms of health aspects, the different areas of work and work realities but also opportunities for next career steps in order to overcome the dead-end and last choice association of professional driving.

Necessity to implement broader image campaigns/ measures by raising public awareness for professional driving as a skill intensive and demanding, responsible and important career for economy and everyday life

Prerequisites in terms of (life) abilities in order to enter into this occupation and/or related training play only a minor role so far because they seem to be rather low at the first glance and also due to the increasing driver shortage that strongly limits the pool of applicants. However, carriers hiring apprentices more and more complain not only about a lack of candidates in general but of qualified candidates in particular. Recruitment/ Assessment tools that support carriers and VET providers to evaluate candidates systematically with regard to their (life) abilities, but also for career counsellors and placement officers in order to provide adequate guidance and counselling to job seekers would be of use here. The candidate evaluation/ assessment approach as practiced by Canadian VET providers for professional driving can be considered as a good practice example in this regard.

Enriching recruitment and selection processes with HRD/ recruitment tools in order to evaluate candidates' necessary abilities already before entering into training and/or the occupation

A good practice of the German apprenticeship scheme "BerufskraftfahrerIn" (professional driver) as well as of the related school-based retraining for job-changers is the integration of the driving license training into this training as an integral part of

Integration of driving license training into apprenticeship and retraining as well lowering age limit for truck driving during apprenticeship as best practice

these I/CVET programmes as well as the eligibility to drive a truck during apprenticeship already at the age of 18 under certain conditions. This strongly lowers the entrance barrier for young people as well as job-changers into the profession. However, this is not the case for the driver CPC due to the weak links between the skilled worker training and the driver CPC as outlined with regard to standard 1 above.

Standard 3: Training design and choice of methods within initial qualification and periodic training

The choice of training design and methods within professional driver training refer to all kinds of learning outcomes related to the training, the specific needs of the target group and the needs of heterogeneous groups. They incorporate a high level of practical relevance and reflect the state of the art of training possibilities for professional drivers.

The application of the learning outcomes approach and therefore first and foremost the description of the qualification profile "BerufskraftfahrerIn" (professional driver) and the driver CPC in terms of the EQF and/or the GQF descriptors is a basic requirement for the realisation of this standard. As mentioned already earlier the ProfDRV profile can serve as a starting point for these definitions/ description.

Necessity to describe the qualification profile "BerufskraftfahrerIn" and the driver CPC in terms of learning outcomes

The German apprenticeship scheme "BerufskraftfahrerIn" (professional driver) already combines work and study in the framework of the dual system but also the related formal retraining foresees a traineeship and therefore a direct link between school-based and company-based education. Both approaches can be considered as best practice with regard to the realisation of this standard. Especially the "Verbundausbildung" (vocational training where two or more companies are training supervisor in the framework of an apprenticeship) can be stated as a promising practice with regard to the characteristics of the transport sector with a big number of SMEs in order to enable apprentices within a 3-year apprenticeship to experience the different areas of work of a professional driver although the own apprenticeship companies does not cover all areas of work. The work-/ company-based training is furthermore accompanied by a didactically skilled professional who oversees and facilitates the apprentices training in the company from a training perspective.

Combination of work- and school-based learning within German apprenticeship and retraining as best practice approach

The driver CPC training on the other hand provides a lot of space for improvement and further development with regard to the realisation of this standard. Especially a higher flexibility and adaptability of training contents to participants/ learners needs especially within periodic training as well as the integration of practical training elements into training by default would be highly supportive for the realisation of this standard. This would require different measures such as emphasising of pedagogical quality within the accreditation process of courses, a sound and continuous pedagogical training of trainers, a more flexible approach towards the selection of training contents and the continuous development of innovative, adaptive and practice oriented training material and tools by training providers and publishers. The consistent application of the learning outcomes approach could act as facilitator in this regard.

Need for more flexibility with regard to content and training structure especially within periodic training which can be realised through the learning outcome orientation

A major component in order to ensure adaptability of training to individual learners needs is the possible use of interactive training settings realised with computer-/web-based but also mobile learning solutions. Contrary to the currently primarily practiced

Enabling of interactive web-/ computer-/ mobile learning that are able to adapt to the individual learners prerequisites and needs under pedagogical considerations

strongly teacher/ trainer oriented school-based approaches such learning environments allow a strong individual learner focus and the integration of work-based (informal) learning. Such opportunities should strongly be further explored regarding their practicality from a pedagogical perspective as for instance envisaged within the European project "ICT-DRV" coordinated by DEKRA (DE). Broadening flexibility under strong consideration of a high pedagogical quality should therefore also be practiced in the framework of the methods to be applied within professional driver training.

Standard 4: Requirements on trainers

Training for professional drivers is implemented by well qualified and accredited trainers that possess the necessary professional abilities in terms of expert knowledge (skills and competences within the subject they teach) and the necessary pedagogical knowledge, skills and competences in order to implement high quality training for professional drivers.

The German VET system already foresees requirements on trainers, coaches in companies and teachers in vocational schools with regard to formal vocational training (within the dual system). These requirements can serve as an orientation in order to implement the basic requirements on trainers as defined in ProfDRV standard 4 also with regard to the driver CPC training. Such an approach would require that trainers within driver CPC training (initial and periodic) need to have a related formal vocational qualification such as "BerufskraftfahrerIn", a certain level of practical work experience in this profession (due to the characteristics of the profession additional practical work experience should be able to replace formal vocational IVET qualification in the field) as well as an additional pedagogical qualification such as the so called "AEVO"-qualification (certificate for trainers for apprentices within companies), the industrial master road traffic, the formal qualifications I/CVET educator or vocational educator or other training for trainer qualifications specifically for professional driver trainers as already practiced by some VET providers as long as they meet a predefined set of minimum requirements in order to implement training as outlined in the ProfDRV standards. The "AEVO" ("Ausbildereignungsverordnung", ordinance on aptitude of in-company instructors within dual system apprenticeship) requires from such vocational trainers on the one hand the personal aptitude (with regard to relevant criminal record) and the professional aptitude. The professional aptitude refers to the trainers' vocational qualification in the field of his/her trainer work as well as to his/her profession and work educational qualification (educational, pedagogical and didactical abilities).

However, under consideration of the aspired learning outcomes/ topics to be addressed within professional driver training and as defined by directive 2003/59/EC also trainers coming from other professions such as driving instructors, mechatronics, physiotherapists or nutritionists should be eligible to provide training, but exclusively complementary and in their specific field of expertise in order to ensure a high quality of this vocational training for professional drivers. Especially with regard to driving instructors this should be clearly specified with regard to the aspired learning outcomes.

Orientation on requirements on trainers within the formal German VET system also with regard to requirements on driver CPC trainers in initial and periodic training

Limited permission of unrelated professions as trainers such as driving instructors within fields of their specific expertise

Continuous training for trainers is also aspired for company-based trainers within the dual system apprenticeship. Although not obligatory as required within the ProfDRV standards, the experiences gained in this regard as well as already existing structures such as the foraus-portal can also serve as an orientation within continuous training for professional driver trainers. Further content and structural input could be provided by larger training providers that offer such continuous training already today at an ongoing basis and as a quality criterion for their work.

Continuous training for professional driver trainers based on already practiced CVET approach for trainers

Standard 5: Assessment & validation in initial qualification and periodic training

Assessment & validation of initial qualification and periodic training are oriented on learning outcomes, and allow the assessment of learning outcomes achieved within initial training / qualification or elsewhere.

Just as for the implementation of standard 3 on "Training design and choice of methods within initial qualification and periodic training" the application of the learning outcomes approach is also a necessity for the realisation of this standard on "Assessment & validation in initial qualification and periodic training" because the learning outcomes define what should be assessed and in what way.

Definition of learning outcomes for qualification "BerufskraftfahrerIn" and driver CPC as basis for assessment and validation

Current assessment practice already provides very promising elements such as the combination of practice and theory and the involvement of different kind of stakeholders and practitioners into examination boards within assessment for the formal VET scheme "BerufskraftfahrerIn" (professional driver). Also the current assessment practice within the initial driver CPC qualification is very promising. Assessment within initial qualification consists of a theoretical test about 240 minutes and a practical test about 210 minutes. The theoretical test includes multiple/one-choice-questions, open questions and the argumentation of a practical situation. The practical test consists of a 120 minutes driving test, a 30 minutes practical test on topics such as load security or emergency situations and 60 minutes handling of critical driving situations. A guideline for contents to be tested has been developed that already has some elements of learning outcome orientation. This approach is very promising because the mixture of methods enables the assessment of knowledge, skills and competences. However, a clear connection to predefined learning outcomes is essential for the implementation of this standard. For this purpose also training for assessors in this kind of learning application within assessment is inevitable in order to ensure the sound implementation of this approach.

Enrichment of the current assessment practice through the application of the learning outcomes approach within a similar organisational approach

Besides this kind of test also the combination of training and test exists (accelerated initial training) and reduces the assessment to a 90 minutes theoretical test. Based on the EQFs requirements and in order to ensure an equal level of abilities it would nevertheless (and despite to the procedures outlined within directive 2003/59/EC) be favourable if only one kind of test would exist in order to assess the aspired learning outcomes independently from the way how they have been obtained. This is necessary because it needs to be doubted strongly that different kind of attended training can lead to the same learning outcomes as it is presumed within the current approach. Such an approach that exclusively focuses on an equal assessment would additionally allow for different kind of training approaches including approaches that

Introduction of one kind of test only independently from training attendance in order to ensure a coherent level of abilities

include distance and mobile learning.

Assessment is not foreseen with regard to periodic training in Germany. However self-assessment and formative evaluation approaches might be useful in order to allow drivers to get a realistic picture of their individual level of abilities. The usability of self-assessment should be further explored with regard to the application of mobile and distance learning approaches within periodic training. For this purpose predefined learning outcomes for periodic training are essential and trainers need to be specifically trained in order to guide learners through self-assessment and to facilitate individual learning processes supported by distance learning tools.

Introduction of self-assessment and formative evaluation in order to facilitate periodic training and the integration of innovative and alternative training approaches into periodic training

Standard 6: Recognition of non-/informal learning

In- and non-formal learning are accepted and recognised as form of learning within initial and continuous/ periodic training for professional drivers. They lead to the same certificates/ proofs as those acquired within formal learning environments.

The possibility for recognition of in-/non-formal or prior learning within the formal vocational education and training system is so far possible through the already introduced "Externenprüfung" (external examination). This external examination allows individuals with several years of work experience in a certain profession to participate in the regular IVET examinations for apprentices in order to obtain a skilled worker certificate in the profession he/she carried out before. Recognition of foreign formal VET certificates is furthermore possible through the just recently launched "Anerkennungsgesetz" (Federal Recognition Act). Also the implementation of directive 2003/59/EC foresees the recognition of non-/ informal learning through the test-only option that allows for participation in an examination without course attendance. However, as outlined earlier the reference of the associated test to pre-defined learning outcomes as well as the limitation of testing to only one kind of test independently from the way how learning took place would be necessary for a sound implementation of this standard with regard to the initial driver CPC qualification. It needs to be further evaluated if both options for recognition of non-/informal learning within professional driver qualification are treating the recognition of formal and non-/informal learning equally.

Implementation of this standard can build on already existing recognition opportunities: the "Externenprüfung" (external examination) and the test only option; both options need to be further explored with regard to their equal treatment of formal and in-/non-formal learning

Definition of learning outcomes for driver CPC and formal qualification "BerufskraftfahrerIn" as well as limitation of driver CPC testing to one kind of test (professional driver) inevitable

Recent efforts to explore the implementation of ECVET (European Credit System for VET) in Germany with the DECVET initiatives as well as the piloting activities for the "Teilqualifikation" (partial qualification) in which also professional driving has been further explored can be considered as possible interfaces in order to implement the described "filling of gaps" within the non-/informally acquired abilities with the attendances of courses. However, those efforts can only be considered as starting points for the implementation of this standard, but require additional and further exploration and development in order to fulfil the described quality standard with all its elements.

Experiences from DECVET and "Teilqualifikation" (partial qualification) projects can be starting points for further considerations

In any case those considerations should not be limited to IVET/ initial qualification but should also be extended to CVET/ periodic training. Opportunities to be explored in this context could for instance be the possibility to prepare for the skilled worker certificate "BerufskraftfahrerIn" (professional driver) based on the driver CPC

Recognition of non-/informal learning also within CVET/ periodic training ... in order to accumulate credits for higher qualification levels through the participation in periodic training

qualification or an industrial master road traffic certificate through periodic training. Both opportunities would require a flexibilisation of the current periodic training approach as described already earlier.

Furthermore recognition of non- and informal learning within periodic training could play a role in order to open up periodic training for distance and mobile learning approaches. This could be realised through the already previously proposed introduction of self-assessment procedures facilitated by a tutor/ trainer and high-quality distance/ mobile learning solutions. Quality assurance would play a major role in this context and is currently further explored by the European project ICT-DRV.

... in order to compensate course attendance in the framework of periodic training

Standard 7: Adapting content and training approaches to changing skills needs

Vocational education and training for professional drivers are responsive to changing skill needs and can be adapted without losing relevance, transparency and comparability of the driver CPC in Europe.

The regular review and adaptation of formal VET qualifications under the involvement of social partners is an integral part of the German VET system and therefore also applied to the formal VET qualification "BerufskraftfahrerIn" (professional driver). The qualification has been renewed the last time in 2001. Furthermore the dual system with its work-based learning approach ensures the adaptation of the content to changing skill needs through the apprentices' integration into regular working processes.

Review process of formal VET qualifications through social dialogue as good practice example

The driver CPC contents have been defined in the annex of the BKRfQV based on directive 2003/59/EC. A review/-newing of this annex is not specified within the relevant legislation. The contents defined in the BKRfQV are regularly update within the given thematic framework by publishers and training providers developing training material. However, it would be favourable for the implementation of this standard if this review of pre-defined contents (and ideally learning outcomes) would additionally follow a similar but more regular process as the formal VET qualification "BerufskraftfahrerIn" (professional driver) in order to ensure its actuality.

Adaptation of driver CPC to skills demands would strongly benefit through the integration of a social dialogue on training contents / aspired learning outcomes

Similarly to contents and skills demands also methods are subject to continuous further development and innovation in order to improve training practice and facilitate learning processes. Especially the facilitation of learning with multimedia plays a more and more important role within training in general. So far the use of top-of-the-range simulators is possible within periodic training and the use of computer-based learning is supported as long as it is not implemented in the framework of distance learning but within class-room learning. However, recent research and development work strongly suggests and explores the integration of especially distance and mobile learning solutions into professional driver training in order to address the characteristics of the driver profession. Research in this regard is for instance implemented within a mobile learning project by IAG as well as in the European project ICT-DRV. This topic is, furthermore, regularly discussed at the TTD conference (Technology based Training for Drivers) organised by the German Road Safety Council (DVR), Employer's Liability Insurance Associations (BG), Public Sector Accident Insurers (UK) and the German Insurers Accident Research (UDV). Furthermore notable research at European level strongly suggests the further integration of e-learning approaches in order to update

Enrichment of training with innovative multimedia-based learning approaches based clearly defined quality criteria in order to improve training practice and make learning corresponsive to professional drivers work reality

professional drivers' abilities under consideration of their work reality. However, any kind of distance learning application within professional driver training should be strongly underpinned with quality considerations. The European project ICT-DRV will contribute here by developing quality standards for the integration of multimedia-based learning into professional driver training.

Standard 8: Quality assurance in periodic and initial training

Quality assurance systems and measures are put in place for the implementation of professional driver training in the framework of directive 2003/59/EC. Quality assurance is primarily based on pedagogical considerations in order to ensure a high quality within professional driver training.

The previous standard scenarios already provide a broad overview about already practiced and possible measures in order to assure quality within professional driver training in Germany. On top of the already described measures quality assurance is already practiced through the accreditation of training providers, trainers, assessment procedures and training courses by competent bodies within CPC training. These accreditation processes should – in order to implement this standard – nevertheless be enriched by pedagogical/ vocational education considerations and criteria as they have been outlined in the overall ProfDRV quality standards and in the previous explanations. German adult/ vocational education research provides additionally a number of suggestions on such education based quality criteria (Arnold, 1996 and Faulstich, 1998).

Introduction of pedagogical quality criteria into the accreditation process of training providers, courses, assessment procedures and trainers

Enforcement of training implementation is implemented by competent body and based on primarily administrative criteria such as time spent in the classroom or accreditation of the training venue. These enforcement measures should be improved in terms of frequency but first and foremost in terms of the implementation of pedagogical/ vocational educational quality criteria. In order to ensure a sound implementation of such a quality approach especially the pedagogical knowledge, skills and competences of enforcement but also accreditation officers is crucial and should be given special attention.

Enforcement of quality criteria implementation and accreditation by officers with the necessary pedagogical qualification

Besides these formal quality assurance processes also formative evaluation approaches are already practiced within professional driver training by individual trainers in order to use participants' feedback for the continuous improvement of training. Such an evaluation approach is already integral part of relevant educational qualifications as mentioned earlier in the context of standard 4 and should also be an integral part of the educational qualification requirements on trainers for professional drivers in order to enable them to work continuously on the improvement of their training through formative evaluation.

Introduction of formative evaluation into training practice

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For further information on the project please consult:

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