



Quality Apprenticeships: A Manual for Educational Organisations

Version 3

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1. Abbreviations

| | |
|-----------------|---|
| ApprenticeshipQ | Mainstreaming Procedures for Quality Apprenticeships in Educational Organisations and Enterprises; Erasmus+ project |
| ECTS | European Credit Transfer System |
| ECVET | European Credit System for Vocational Education and Training |
| EQAVET | European Quality Assurance in Vocational Education and Training |
| EQF | European Qualifications Framework |
| GDPR | General Data Protection Regulation |
| HE | Higher Education |
| HVET | Higher Vocational Education and Training |
| IAG | Information, advice and guidance |
| MERI | Cedefop MERI compass |
| PDCA | Plan Do Check Act Cycle |
| PHE | Professional Higher Education |
| QC | Quality Criteria |
| SMART | Specific Measurable Achievable Reasonable Time |
| SME | Small and medium enterprises |
| WBL | Work-based learning |
| VET | Vocational Education and Training |

2. Summary

The project “Mainstreaming Procedures for Quality Apprenticeships in Educational Organisations and Enterprises” (ApprenticeshipQ) will support educational institutions and placement providers to offer high-quality education to their apprentices. We consider educational institutions here as Higher Vocational Education and Training Institutions, and Professional Higher Education Institutions as Universities of Applied Sciences and Colleges, as well as Academic/ Research-oriented Universities). The project’s proposed assessment of quality will make these processes more manageable and will benefit all stakeholders. These benefits include lifelong learning for teachers, professors and tutors, enhancements for placement providers, improvement of apprentice’s skills development and overall higher quality of the learning experience.

The activities of ApprenticeshipQ will strengthen the cooperation and networking between educational institutions and their training partners’ site (placement providers), by providing them with innovative practices to enhance or establish quality management documented information that was developed and tested during the project.

The aim is to develop management tools that support educational institutions and placement providers to offer and direct high-quality apprenticeships. These management tools shall be recognised as a model to improve the quality of the apprenticeships and will serve as a basis for the development of formal international standards and guidelines.

This guide is structured as follows:

The guide starts by giving an introduction to the ApprenticeshipQ project, containing definitions of the research, which led to this guide. Guidance on how to use this guide follows. This section provides a more detailed description of the present document and its objectives.

The quality criteria developed in the project are listed with the corresponding measurement indicators in chapter 5. Each criterion is supplemented by a short description and an example. The examples are taken from their project qualitative interview survey with numerous placement providers. Also, a link to documented information is provided for each quality criteria. How these criteria can be implemented is explained in Chapter 6 using a PDCA (Plan-Do-Check-Act-Cycle) model.

3. Introduction

The lack of work experience and the skills mismatch between labour demand and supply are two of the greatest challenges for young people to transition from the world of education to the world of work (European Commission, 2017; OECD, 2018). A promising way to face those challenges is through apprenticeships (European Training Foundation, 2013). However, their implementation is complex and the lack of European guidelines to support them seems to be preventing many of the providers in the sector – higher education institutions and placement providers, particularly small and medium enterprises – to launch valuable, steady and sustainable apprenticeship programmes. Furthermore, if work placements are unplanned and unstructured, the development of new competences and skills does not take place (Inter-agency Group on Technical and Vocational Education and Training, 2017).

To address this issue, the project ApprenticeshipQ was initiated and launched with the support of the European Commission. The project's aim is to strengthen the quality of work-based learning (WBL), the transfer of theory and practice to provide positive outcomes for apprentices, educational institutions and placement providers.

There is no universally accepted set of management principles for quality of WBL. Therefore, education providers, as well as placement providers, apply their quality models to WBL activities. Several research documents, papers, position papers, etc. include proposed elements of quality and success factors for WBL.¹

The focus of the project ApprenticeshipQ is on Higher Vocational Education and Training (HVET) and Higher Education (HE) at European Qualifications Framework (EQF) levels 5 and 6. As there is no single agreed definition, the consortium worked with the following definition of apprenticeships:

The process of education, which takes place in shared responsibility between providers from the world of work and education institutions in a learning/education partnership.

In addition to this, in the further course of this guide, an apprentice is defined as a person who is doing an internship in one of the following forms of apprenticeships.

According to these definitions, the researchers analysed the types of apprenticeships in seven European countries and developed a typology of apprenticeships (see Figure 1):

¹ See for example: Cedefop (2015): Handbook for VET providers; EQAVET - European Quality Assurance Reference Framework; ESG (2015) Standards and guidelines for quality assurance in the European Higher Education Area and many more.

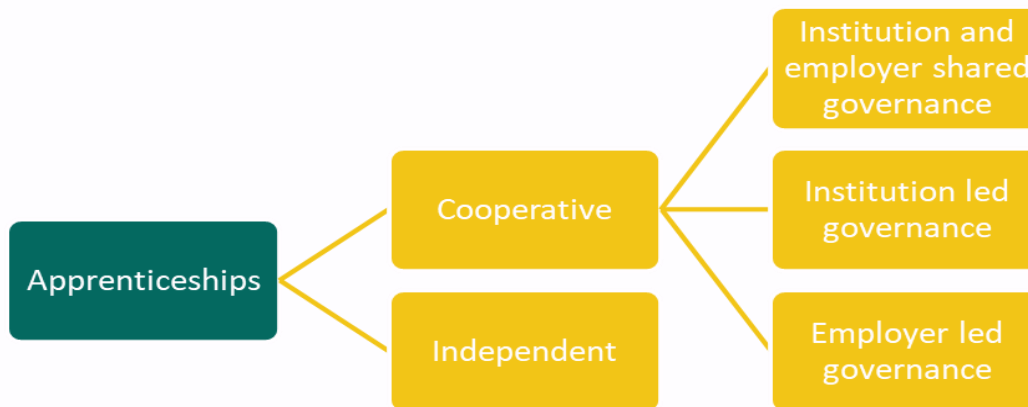


Figure 1: Typology of apprenticeships (ApprenticeshipQ project).

This typology encompasses two types of apprenticeships: independent and cooperative apprenticeships.

Independent apprenticeships are those organised and managed by placement providers, without any involvement from educational institutions. They happen dissociated from any educational curricula, which means that, usually, the apprentices are not involved in any educational programme at the same time but, even if they are, there is no relation between the undergoing studies and the apprenticeship.

Cooperative apprenticeships are those organised and managed in cooperation between educational institutions and placement providers. They vary in terms of governance, some being more placement providers led and others more educational institutions led, but they are always associated with a curriculum and are designed as a means for apprentices to put theory into practice and master knowledge in a way that empowers them with professional autonomy. Further details about their characteristics can be found in our report "[Typology of Apprenticeships in Higher Vocational Education](#)".

This typology helps to identify different types of apprenticeships in Europe in the future, harmonising the dialogue between its providers across countries and facilitating mobility and recognition schemes.

Based on this typology the researchers conducted interviews with educational institutions and placement providers to identify success factors.² These best practice cases led to the development of 30 quality criteria, which were validated by a survey with more than 480 participants. The survey allowed participants to rank the criteria in order of importance, suggest improvements, reject criteria and/or propose new criteria. The scale ranged between cannot evaluate (1) – totally agree (2) – agree (3) – disagree (4) – totally disagree (5).

In order to achieve the target 250 responses, the survey was translated into the national languages of the project partners and was open for 12 weeks. Five stakeholders were identified

² For further information please visit <https://apprenticeshipq.eu/practice-cases-collection/>

in advance as target groups: auditors and quality experts, providers of Higher Education/Higher Vocational Education and Training, representatives of placement providers, apprentices, who have already started or completed a work-based learning period, and alumni.

All stakeholders took part in the survey: providers of Higher Education/Higher Vocational Education and Training were the largest group with 26%, followed by auditors and quality experts (24%) and apprentices (20%).

The results of the survey showed that the participants regard all quality criteria as important (totally agree – 2). The means ranged between 2.10 and 2.42. Therefore, no ranking could be established. Thus, all 30 quality criteria were included in the final list (see Figure 2). Similarly, the means between stakeholders showed little difference.³

The quality criteria are not arranged according to importance but are to be understood as equivalent. In apprenticeships, the stakeholders have a shared responsibility for conducting high-quality apprenticeship. Nevertheless, there are some quality criteria, which are more in the responsibility of the educational institutions and some, where the placement providers have a higher responsibility. Therefore, the quality criteria have been allocated either towards the educational institutions or towards the placement providers within the project in order to provide clarity.

These quality criteria were used to develop this guide to provide educational institutions, employers and particularly placement providers with quality management documented information to establish and enhance high-quality apprenticeships.

Within this project, an online tool is also being developed in the form of a checklist that enables self-checking.⁴

The developed quality criteria are listed below with their measurement indicators, which explain the individual criteria in more detail. The first 19 quality criteria are led by the educational institutions, whereas the following 10 quality criteria are led by placement providers. Quality criteria number 30 is equally shared between educational institutions and placement providers. Consequently, this guide contains the quality criteria numbers 1 to 19. An overview of all 30 quality criteria can be found in Figure 2 and the one-pager on [page 36](#).⁵

³ For further information please visit <https://apprenticeshipq.eu/a-requirements-standard-survey/>

⁴ For further information please visit <https://apprenticeshipq.eu/satool>

⁵ For the manual for placement providers please visit <https://apprenticeshipq.eu/manuals/>

| Responsibility of the educational institutions | | Responsibility of the placement providers |
|--|--|---|
| <ol style="list-style-type: none"> 1. Involvement of Stakeholders in Designing Learning Outcomes 2. Definition of SMART Learning Outcomes 3. Transparency 4. Definition of Standards for Placements 5. Identification (finding) of Placement-Positions 6. Capacity Building for SMEs 7. Management of Placement-Supply-Database 8. Data Protection 9. Establishing the Agreement 10. Matching Apprentices' to Placements 11. Monitoring of SMEs Activities 12. Monitoring of Apprentices Activities 13. User Support and Issue Resolution 14. Evaluation of Apprenticeships 15. Assessment Design 16. Performing and Monitoring the Assessment 17. Grading 18. Certification and Recognition 19. Complaints and Appeals | <p>Some quality criteria might have a shared responsibility.</p> | <ol style="list-style-type: none"> 20. Preparation for the Apprenticeship 21. Identifying Mentors 22. Establishing the Agreement 23. Matching Apprentices' with Placements 24. Conditions of the Apprenticeship 25. Integration of the Apprentice 26. Mentoring 27. Records of Apprenticeships 28. Assessment of Learning 29. Evaluation of Process |
| <p>30. Quality Management Procedures</p> | | |

Figure 2: Quality criteria apprenticeships (ApprenticeshipQ project).

4. How to use this manual

The 19 quality criteria for educational institutions are listed individually below. Each quality criterion and its importance is briefly summarised and then described in detail using the corresponding measurement indicators. The respective sub-items illustrate exactly what the quality criteria are about and help identify documented information already in place as well as possible opportunities for improvement. Quality criterion No. 30, Quality Management Procedures is equally important for placement providers and educational institutions. Therefore, this quality criterion is included in both manuals.

You can perform a self-check of the quality criteria using the checklist in our online tool: <https://apprenticeshipq.eu/satool>

In the online tool, the quality criteria and measurement indicators can be evaluated by using the following response options:

- **yes**, this documented information is already available in your company as a placement provider.
- **no**, this documented information has not been implemented yet.
- **not relevant**, this documented information is not germane for your placement provider.

In this document, the quality criteria and the measurement indicators are listed in tabular form. The following yellow box shows examples, as an additional help for further understanding, how educational institutions and placement providers have implemented the quality criteria in their daily work.

The link at the end of each criterion leads to a possible implementation form. All documented information is stored on the ApprenticeshipQ website in an editable format and can be downloaded. These forms should only serve as a *suggestion or idea* and can be adapted to the respective needs for you, as a placement provider. The quality criteria can also be implemented in other ways, in which a deviation from the documented information can take place.

This documented information required to be controlled and maintained by an organisation and the medium on which it is contained. The documented information can be in any format and media, from any source and can refer to:

- the management system, including related processes.
- information created for the organisation to operate (documentation).
- evidence of results achieved (records).

Furthermore, we distinguish between:

Documented information **maintained**: documented information that supports the operation of processes (examples: policies, work instructions, forms, checklists etc.).

Documented information **retained**: documented information that provides confidence that the processes are being carried out as planned (examples: records such as results of tests, minutes of meetings, audit or other evaluation reports, the content of forms or checklists after completion, etc.).

It should also be noted that not all quality criteria are necessary for every placement provider. Here, the specific characteristics of the placement providers play a decisive role (orientation, size, etc.).

The guide gives you an evidence-based picture of the current situation in your institution about the quality of apprenticeships and enables you to implement improvements. Each placement provider must be considered individually to determine which quality criteria support the respective process.

This guide and/or the online checklist can be consulted and answered by any person with responsibility for apprenticeships in any educational institution or company.

5. Quality criteria for educational institutions

The purpose of this guide is to analyse the existing quality management documented information and to equip placement providers and in particular educational institutions, with a tool to validate and improve the quality of apprenticeships to strengthen the collaboration between the stakeholders: apprentices, placement providers and educational institutions. Hence, supporting the transition of apprentices from the world of education to the world of work.

Quality experts from eight European countries developed 30 quality criteria and measurement indicators for this purpose and included best practice examples. Note: Quality apprenticeships take place in shared responsibility between all stakeholders, e.g. educational institutions, placement providers, apprentices.

1. Involvement of Stakeholders in Designing Learning Outcomes

To develop the overall apprentice programme, stakeholders need to be involved to discuss the requirements of apprenticeships, which are the preconditions to design learning outcomes. These stakeholders can be employers, quality experts, educational institutions, students, alumni, etc. on a national, regional and/or local level.

Measurement indicators

Is there documented information to identify relevant stakeholders and their appropriate requirements, specifying:

the method of consultation?

the frequency of consultation?

how to keep records of the consultation?

Is there documented information for documenting the actions taken as a result of these consultations?

Stakeholders can be employers, educational institutions, apprentices, etc.

Is there documented information to manage all the documentation gathered during the Apprenticeships from their designs to the evaluation of their performance?

Are the regulatory requirements adapted to sectorial reality?

Example: *Orona is a Spanish elevator and escalator manufacturer offering apprenticeships, which integrate the apprentice in multi-disciplinary work teams. Therefore, this placement provider is taking part in several quality and accreditation committees. These committees evaluate new university undergraduate and master degrees. Furthermore, at Mondragon Unibertsitatea dual programmes ORONA is a member of the evaluation committee.*

[Form 1: Involving Stakeholders in Designing Learning Outcomes](#)

2. Definition of SMART Learning Outcomes

When discussing the learning outcomes, the researchers suggest using the SMART technique to characterise the learning outcomes. Therefore, the objectives should be specific, measurable, attainable, relevant, and time-framed.

Measurement indicators

Is there documented information on learning outcomes design for apprenticeships, specifying:

that learning outcomes shall be described in terms of knowledge, skills, competences, responsibility and autonomy (or behaviour)?

that the learning outcomes should be specifically assessed?

Example: *GZS, Center Za Poslovno Usposabljanje Ljubljana is a business training centre in Slovenia. The placement provider offers apprenticeships as apprentices´ bring in new energy and the company always tries benefit from their knowledge, while giving the apprentices´ a sense of self-confidence and usefulness. Therefore, the placement provider has designed their learning outcomes according to the SMART method, in line with the educational institution expectations.*

[Form 2: Preliminary Report and Technical Definition of the Training Project](#)

3. Transparency

Transparency is needed between all stakeholder groups to ensure that all procedures, e.g. the learning outcomes and their assessment, are comprehensible.

Measurement indicators

Are the below-documented information published:

documented information on how to Identification of Stakeholders and their relevant requirements?

the learning outcomes and assessment criteria of the apprenticeship programme?

Example: *Merlin Entertainments manages large fun fair parks and entertainment venues such as the London Dungeon and Madame Tussauds. It is leading on developing industry-wide standards and relevant training and education in the specialist entertainments sector. This placement provider has transparent management and accountability structures in place to record the progress of the apprentice, including formal liaison between the company, managing agent and trainer.*

[Form 3: Commitment Statement](#)

4. Definition of Standards for Placements

Standards are needed to support institutions and employers offering apprentices confidence that their placements provide high-quality learning opportunities.

Measurement indicators

Does the educational institution have a set of documented criteria for apprenticeships, defining:

learning outcomes?

conditions of employment?

condition for mentoring and/or supervision?

a workflow for the apprenticeships, including:

timelines?

responsibilities?

reporting requirements?

Example: *SCHENKER D.D. is a logistics service provider offering apprenticeships to involve apprentices in the work process. Therefore, the cooperating educational institution has prepared a contract and together with the placement provider a learning plan for conducting the apprenticeship is developed.*

[Form 4: Student's statement about the rules of conduct during the practical training](#)

5. Identification (finding) of Placement-Positions

To ensure matching between companies and apprentices and to minimise the dropout rate, the places must be filled with the right apprentice. Standardised procedures can help with this selection.

Measurement indicators

Has an institutional coordinator for placements been nominated?

Is there a marketing and/or advertising strategy for looking for placements?

Does the strategy include provisions for

engaging staff?

engaging apprentices?

engaging potential employer's representative bodies?

recruiting potential employers?

Are the apprentices' needs and expectations discussed with the educational institution supervisor?

Example: *The Baden Wuerttemberg Cooperative State University (DHBW) is a state-accredited University of Applied Sciences, whose special feature the consistent interlocking of scientific studies and practice-oriented learning with the dual partners. To identify placement positions, the DHBW in Heilbronn has nominated one person to coordinate the placements. This person is not only responsible for consultations services but also for the coordination of DHBW scouts, apprentices, who liaise as apprentice ambassador. These scouts also support the organisation of recruiting days.*

[Form 5: Project / Apprenticeship Proposal](#)

6. Capacity Building for SMEs

Capacity building is needed to equip placement providers with the right tools to start and improve their apprenticeships.

Measurement indicators

Does the educational institution publish introductory information on apprenticeships online?

Does the introductory information include Frequently Asked Questions (FAQ) or knowledge database, which shares experiences from and for mentors?

Does the educational institution organise recruitment and/or information events for potential employers?

Does the educational institution offer training sessions for potential employers?

Does the educational institution provide educational resources for placement providers?

Does the educational institution provide cost-sharing agreements, and/or recognition and award, for placement providers that provide quality apprenticeships?

Example: *GOIENA communications is offering apprentices' to acquire professional skills, specific to a degree, which are previously defined in the map of competences of the degree. The apprentice is integrated into real work experiences considering them as one more employee. Therefore, this placement provider is sending their new tutors to take part in an initial training session offered by the university to share experiences and good practices of the apprenticeship model. Placement provider tutors, together with the educational institution mentor, who will tutor the apprentice (throughout the entire process) define the study plan for the upcoming months or years, ensuring that the apprentice can develop and acquire the previously established professional and knowledge skills.*

[Form 6: Capacity Building for SMEs](#)

7. Management of Placement-Supply-Database

A Placement-Supply-Database can support the management of apprenticeships by matching apprentices with placements. Apprentices can be found and contacted by employers and companies are supported in the recruitment of young executives.

Measurement indicators

Does the educational institution keep an internal database of placements?

Is there an established policy for who can access and edit which part of the database?

Is there documented information for maintaining and updating the database, including:

relevant metadata from the learning agreement?

all evaluation data linked to the placement?

the history of apprentices assigned to the placement?

the list of placement providers providing apprenticeships?

Example: *AVL List GmbH is a placement provider for the development, simulation and testing of powertrain systems (hybrid, combustion engine, transmission, electric drive, batteries, fuel cell and control technology) for passenger cars, commercial vehicles, construction, large engines and their integration into the vehicle. The placement provider has an apprenticeship management database, where apprenticeship offers are placed. Here an apprentice can find the topic, the place, and the requirements.*

[Form 7: Placement Management Database](#)

8. Data Protection

Data protection is an important topic, which has been in the spotlight even more since the introduction of the GDPR. Data protection must be ensured to fulfil the legal requirements on the one hand and to protect against data misuse on the other.

Measurement indicator

Is there an established policy for protecting and managing personal data?

Example: *The educational institution School Centre Škofja Loka created a GDPR template form, which is accessible on their webpage. The form offers enabling access to personal data for enrolment purposes, insurance purposes during the apprenticeship, publication of photographic and video materials, invitation to evaluation surveys, processing applications for subsidies and graduate tracking.*

[Form 8: Example of Documented Information on the General Data Protection Regulation \(GPRD\)](#)

9. Establishing the Agreement

An agreement between stakeholders should be established to document the arrangements, which are beneficial for all stakeholders.

Measurement indicators

Is there documented information describing the management workflow for establishing a contract, including:

the timelines for signature?

the specific roles of signatories in the drafting process, such as apprentices, educational institutions, and placement providers?

Is there a model contract for apprenticeships, describing the:

duration?

programme objectives?

learning activities?

possible competences gained?

evaluation of learning activities?

assessment of competences?

conditions of employment? Do the conditions describe the:

position to be held by the apprentices within the placement provider?

remuneration?

occupational health and safety provisions?

working hours; holiday entitlement?

social protection, including the necessary insurance in line with national legislation?

identification of supervisors and/or mentors; including their roles and responsibilities and approval of placement provider mentor?

description of those roles and responsibilities?

apprentice responsibilities?

requirements for apprentice reporting?

| |
|---|
| modes of communication? |
| methods of assessment? |
| monitoring arrangements? |
| resolution mechanism for issues, including conflicts? |
| forms of certification and/or recognition to be issued for apprentices, for the placement provider and the educational institution? |
| Does the educational institution offer apprentices the opportunity for engagement in agreement negotiations? |

Example: *The Rugby Borough Council is a public sector organisation providing a range of services to the town of Rugby such as housing, waste collection, planning services, leisure, and sports facilities. At this placement provider, each apprentice is provided with a contract – called, a training agreement – at the beginning of the apprenticeship. This includes objectives, training plan if relevant – qualification aim, development of competencies – skills, knowledge, behaviours – identified in the national standards document, coaching and feedback processes and assessment regime.*

[Form 9: Apprenticeship contract](#)

10. Matching Apprentices to Placements

During work-based learning, apprentices can apply and develop subject knowledge and skills in a professional environment. Furthermore, apprenticeships provide useful insight into organisations, their discourse, culture, professional socialisation, applied skills, and working relationships. All stakeholders benefit from these insights if the matching of apprentices to placement is completed carefully.

Measurement indicators

Does the educational institution keep a list of suitable available placements?

Has the educational institution implemented an information programme for apprentices, including:

dissemination of informational material?

organisation of information sessions?

availability of personalised consultation services?

preparation for matching interviews?

Is there documented information to identify apprentices' needs and expectations?

Is there documented information for selecting apprentices to match specific profiles?

Does the educational institution keep a list of qualified placement provider mentors?

Example: Mondragon University (MU) is a Co-operative University recognised for its close relationship with industry. It is also an educational project where the practical component acquires a very important place, in which students carry out apprenticeships in companies and/or organisations. The university organises informative sessions for students following the orientation plan. Students request to participate in the Dual training programme. They complete the MU application form uploading the following information: CV, degree and academic year, languages, geographical preferences, the field of interest. Placement providers interested in joining the Dual programme must make the request through this application. The Dual degree coordinator ensures that the training project described by the company fits the profile of the degree and has been completed correctly. Students view companies' offers and select the ones they are interested in. The Dual degree coordinators encourage and support the students interested in a company offer. The company develops the selection process of the candidates.

[Form 10: Process Of Management](#)

11. Monitoring of SMEs Activities

Monitoring supports the assessment of processes, aiming to identify possible deviations, to inform the stakeholders involved and to intervene accordingly. Here, the activities of the SMEs are being monitored to give the employers ideas for improvement.

Measurement indicators

Has the educational institution appointed a named supervisor for each apprenticeship?

Is there a schedule for communication with placement providers?

Does the schedule identify the frequency of:

correspondence?

visits?

Is there documented information on how to conduct a visit, including requirements for:

planning (how, who and communicated to whom)?

evidence collection (means and tools)?

record and report the visit?

Example: *The ESE is a school of education, promoting a teaching practice in formal and non-formal contexts, to enable its students to carry out professional activities in the area of education. This educational institution offers apprenticeships, which take place at the institution and the placement provider. Depending on the apprenticeship plan, the practical component aims to enable the apprentice to approach a real context of his or her future profession. Besides the apprentice shall experience teaching practices, establish the relationship between theory and practice, coexist with the daily complexity of the reality in which he or she finds himself/herself involved and interacting with the workplace colleagues. A team of specialists in various subjects such as mathematics, mother tongue, history, and others both monitor and follow the experience.*

[Form 11: Checklist for the Monitoring of SME Activities](#)

12. Monitoring of Apprentices Activities

Monitoring supports the assessment of processes, aiming to identify possible deviations, to inform the stakeholders involved and to intervene accordingly. Here the activities of the apprentice are being monitored.

Measurement indicators

Is there a schedule for communicating with apprentices, indicating moments for correspondence and visits?

Is there documented information for apprentices to report progress, specifying:

the information to be reported (what)?

frequency of reporting (when)?

report method (how)?

report channel (to whom)?

Example: *Orona is a Spanish elevator and escalator manufacturer offering apprenticeships, which integrate the apprentice in multi-disciplinary work teams. At this placement provider, two tutors monitor the apprentices' activities. The nominated tutor at the placement provider defines the learning agreement and mentors the apprentice during the academic year. Also, the tutor coordinates and assists the apprentice in developing his or her learning plan. Parallely, the university tutor defines or validates the learning agreement, monitors the learning process, and assesses the apprentice.*

[Form 12: Registration of Visit to Internship Hosting Entity](#)

13. User Support and Issue Resolution

The helpdesk acts primarily as a contact point for technical difficulties. However, the helpdesk also operates as a first place to go in case of other difficulties before they are passed on to the relevant staff units.

Measurement indicators

Has the educational institution established a helpdesk?

Is there documented information for contacting the educational institution's helpdesk (e.g. number to call, email, website)?

Does the educational institution promote the existence of its helpdesk?

Is there documented information for resolution of issues?

Does the documented information include specifications to deal with urgent critical issues?

Example: *TŠC MARIBOR is a school centre for technical sciences. This educational institution has published all necessary documents (including apprenticeship catalogues) their website and nominated a contact person with dedicated office hours for apprentices. Therefore, all the stakeholders are aware of the expectations, are involved in decisions, which results in realistic expectations and less dissatisfaction among them. All the stakeholders are at all times aware of whom to contact and address at any time before, during and after the apprenticeship. The satisfaction of all involved is therefore, higher, all the steps and actions during the whole process of apprenticeship are clear and well guided and the outcomes are better.*

[Form 13 : Guidelines for Work Placement / Apprenticeship Preparation and Issue Resolution](#)

14. Evaluation of Apprenticeships

To improve apprenticeships and to analyse the value of apprenticeships, the process needs to be evaluated.

Measurement indicators

Is there documented information for the educational institution to evaluate the placement provider's performance regarding the placements provided and its mentors?

Does the documented information include specifications on:

how to collect input/information from apprentices?

how to collect input/information from the placement providers?

which questionnaire(s) shall be used?

which analysis methodology shall be used?

how to collect the minimum information on relevance and adequacy in a timely way and review periodically?

how to record and report potential corrective and/or improvement actions needed?

how to assure the transparency of the evaluation?

how to identify mentors' excellence and recognising this excellence publicly, e.g. involving mentors in career days, in media...?

Is there documented information for the educational institution to track the employment and career progression of the apprentice?

Example: *EROSKI is a retailer offering projects in sales management and commercial spaces, which motivate students to integrate into real-work experiences. This is key for the apprenticeship experience in the company. At this placement provider, the evaluation process is coordinated by the educational centre, but conducted by the company tutor. All evaluations are collected in a template, defined, and structured by the educational institution. The apprentice receives qualitative feedback from both tutors at the end of each quarter of the apprenticeship.*

[Form 14: Report of Practical Training Organisers to Educational Institutions on Communication with Organisers and Mentors within the Organisation](#)

15. Assessment Design

To ensure formal and informal assessment, assessment design is needed. This design illustrates the learning development and goals of the apprentice.

Measurement indicators

Has the educational institution established a template for the assessment report to be filled in by the apprentices?

Does this template include the assessment of competences?

Has the educational institution established a template for assessment of apprentice progress to be filled in by placement providers?

Has the educational institution established clear rules for the shared assessment?

Does the educational institution establish the evaluation criteria for the apprenticeship and weighting for placement provider and educational institution?

Are those rules published?

Example: *The ESEP School of Education intends to promote a teaching practice in formal and non-formal contexts, to enable its apprentices' to carry out professional activities in the area of education. Therefore, this educational institution has a quality and evaluation support office to implement and develop the quality management system, to achieve the continuous improvement of internal processes. They are evaluating the course and documenting these in an evaluation report.*

[Form 15: Evaluation Sheet for Project Work / Paper in Practical Training](#)

16. Performing and Monitoring the Assessment

Using the assessment design enhances the exchange between all stakeholders. Particularly, between the educational institution and placement providers concerning the supervision of the apprentice.

Measurement indicators

Does the educational institution provide placement providers with guidelines on how to conduct assessments?

Is there documented information for collecting assessment data, including responsibilities and timelines?

Is there documented information for data security including requirements for document traceability, anti-tampering and privacy?

Example: *Siemens Mobility GmbH is a company for the development and production of high-quality chassis for all Rail vehicles (trams, metros, multiple units, High-speed trains and locomotives). At this placement provider, all apprenticeships are evaluated by using a standardised questionnaire. This questionnaire covers the agreement of objectives, the teaching of work-relevant as well as social and professional skills, mentoring and the management system. The evaluation session is organised for the apprentices each Friday after work and the mentor and apprentice evaluate the work done in the current week.*

[Form 16: Report And Evaluation Of The Study-Work Alternate Programme](#)

17. Grading

A grading system is needed to standardise the process and therefore provide transparency.

Measurement indicators

Has the educational institution established a grading system, including a documented:

list of grades?

description of grades?

documented information for the determination of grades?

template to record the grades attributed?

Has the educational institution established clear rules for shared grading?

Example: Douro-ISCE is a Higher Institute of Educational Sciences. The practical component of the apprenticeship plan aims to enable the apprentice to approach a real context of his or her future profession, to experience teaching practices, to establish the relation between theory and practice, to coexist with the daily complexity of school reality and to experiment and interact in practice with apprentices'. This educational institution is grading the apprenticeship based on evaluations issued by the cooperating teacher of the educational institution and the supervising teacher on the part of the placement provider, both of which have the same weight on the final grade.

[Form 17: Assessment](#)

18. Certification and Recognition

Learning outcomes need to be certified to be able to be transferable and recognisable. E.g. when an apprentice is changing their educational institution or is studying abroad. The use of equivalence mechanisms such as ECTS helps to facilitate the recognition and development of international cooperative training activities.

Measurement indicators

Does the educational institution has documented information for the award of credit, which specifies a:

method for allocation of transferable credit?

model for the certificate to be used?

model for any supplemental information to the certificate (diploma supplement, Europass, ECVET, etc), including extra gained knowledge?

method to keep records of awarded certificates?

method to respond to requests for verification of certificates?

Has the educational institution established documented information for the recognition of prior learning?

Example: *Brau Union Österreich is part of the corporation Heineken. It is closely linked to tradition but obliged to the future and characterises and shapes the Austrian beer market. This placement provider has several subsidiaries in different countries and offer apprentices to go abroad during their apprenticeship. Therefore, the company aims to standardise the working places, so apprentices can change easily from one company location to another while conducting their apprenticeship abroad, while the learning outcomes are transferable and recognisable.*

[Form 18: Application for recognition of practical training](#)

19. Complaints and Appeals

When problems occur, a procedure needs to be in place to deal with complaints and appeals coming from both sides – educational institutions and placement providers. This allows for good communication between all stakeholders.

Measurement indicators

Has the educational institution established a complaints and appeals system, including:

documented methods of where to submit a complaint or appeal?

templates for submission of complaints and appeals?

documented information to:

define the scope of complaints and appeals?

investigate complaints and appeals affecting the educational institution?

investigate complaints and appeals affecting placement providers?

investigate complaints and appeals affecting apprentices?

decide on the complaint/appeal?

information on the timeline to give feedback on the complaints and appeals to their authors?

Example: *The educational institution School Centre Kranj created an electronic form intended for the submission of suggestions, comments, compliments, opinions and complaints from all stakeholders (students, staff, companies, mentors, external partners, other) which are part of the established quality monitoring and management system. The electronic form published on their webpage enables effective, anonymous, accessible, and quick solution for all stakeholders.*

[Form 19: Complaints and Appeals](#)

30. Quality Management Procedure

Quality management documented information support the coordination of work-based learning by directing the activities during an apprenticeship to meet the needs of all stakeholders and to improve apprenticeships effectiveness and efficiency continuously.

Note: This quality criterion is in a shared responsibility of placement providers and educational institutions. Therefore, we are using the word organisation, which is referring to both, placement providers and educational institutions.

Measurement indicators

Does the organisation have documented information for dealing with external (educational institutions, apprentices) complaints and suggestions?

Does the organisation have a regular feedback session with the apprentice? Skills assessment & information flow?

Does the organisation have documented information to monitor the performance of the overall apprenticeship programme including:

defined skills, qualification and competences?

assessment plan showing different responsibilities?

standardised templates for written documentation of the qualification process?

report template for feedback talks?

defined criteria of assessment in place?

an interview guide?

a benefit to business success?

contribution to value creation (return-on-investment)?

grading and crediting in cooperation with the educational institution?

Example: WSP is a specialist engineering professional services company operating in markets throughout the world. Its major service areas are transportation and infrastructure, buildings, power and water, environment, sustainability and energy services. This placement provider assures quality by training the mentors (assessment, qualifications), monitoring work-based progress – by the trained mentor, and the organisation of the programme through collaboration between the provider and company. In effect, quality assurance is ‘delegated’ to the organisation that has the appropriate experience and expertise.

Form 30: Quality Management Procedures

Example of documented information for Quality Management Procedures

Responsibility of the educational institution

| | |
|--|--------------------------|
| Involvement of Stakeholders in Designing Learning Outcomes | <input type="checkbox"/> |
| Definition of SMART Learning Outcomes | <input type="checkbox"/> |
| Transparency | <input type="checkbox"/> |
| Definition of Standards for Placements | <input type="checkbox"/> |
| Identification (finding) of Placement-Positions | <input type="checkbox"/> |
| Capacity building for SMEs | <input type="checkbox"/> |
| Management of Placement-Supply-Database | <input type="checkbox"/> |
| Data Protection | <input type="checkbox"/> |
| Establishing the Agreement | <input type="checkbox"/> |
| Matching apprentices' to Placements | <input type="checkbox"/> |
| Monitoring of SMEs Activities | <input type="checkbox"/> |
| Monitoring of apprentices Activities | <input type="checkbox"/> |
| User Support and Issue Resolution | <input type="checkbox"/> |
| Evaluation of Apprenticeships | <input type="checkbox"/> |
| Assessment design | <input type="checkbox"/> |
| Performing and Monitoring the Assessment | <input type="checkbox"/> |
| Grading | <input type="checkbox"/> |
| Certification and Recognition | <input type="checkbox"/> |
| Complaints and Appeals | <input type="checkbox"/> |

Responsibility of the placement provider

| | |
|---------------------------------------|--------------------------|
| Preparation for the Apprenticeship | <input type="checkbox"/> |
| Identifying Mentors | <input type="checkbox"/> |
| Establishing the Agreement | <input type="checkbox"/> |
| Matching apprentices' with Placements | <input type="checkbox"/> |
| Conditions of the apprenticeship | <input type="checkbox"/> |
| Integration of the apprentice | <input type="checkbox"/> |
| Mentoring | <input type="checkbox"/> |
| Records of Apprenticeships | <input type="checkbox"/> |
| Assessment of learning | <input type="checkbox"/> |
| Evaluation of process | <input type="checkbox"/> |

6. From planning to implementation

How can the quality criteria, which were explained in detail in the previous chapters, be implemented? To illustrate this, the following chapter will refer to the PDCA circle.

The PDCA cycle was developed by Shewhart (1931, 1939) and is used within quality management as a problem-solving model (Matsuo & Nakahara, 2013, 198). It is also called the Deming cycle, named after the advanced work of W. E. Deming (Sokovic et al., 2010, 477f.).

The cycle for quality improvement consists of four phases and starts with the planning phase (P), followed by the implementation of the necessary activities to achieve the plan (D - do). The results are checked for their effectiveness (C) and actions (A) are carried out to improve the processes (Matsuo & Nakahara 2013, 198). The implementation of the PDCA cycle means the constant search for methods of improvement (Sokovic et al., 2010, 477f.).



Figure 3: PDCA Cycle (Cedefop 2015, 13).

The PDCA cycle allows both temporary and permanent corrective actions to be taken. In the case of temporary actions, the process is focused on results by practically addressing and resolving the problem. With the permanent corrective action, on the other hand, the cause is investigated and eliminated resulting in a sustainable, improved process (Sokovic et al., 2010, 477f.).

Improving quality means strategic planning, which, however, does not only refer to short-term solutions or errors that have appeared. Rather, strategic planning aims to improve the entire organisation and more specifically its core processes. To develop quality planning, a strategy for the improvement of quality management is needed (Cedefop, 2015, 23).

The following questions should be answered by using a strategy:

- “(a) what should be achieved;
- (b) how can it be achieved, by whom, by when;
- (c) what resources are needed.” (ibid.)

Building on the PDCA cycle, EQAVET's proposal for the implementation of a circular quality assurance framework includes the following points:

- “(a) goal-setting and strategic planning;
- (b) rules and regulations for implementation, continuous monitoring and measurement of results according to predefined goals;
- (c) analysis of factors contributing to quality and management of change in view of the achieved results;
- (d) new strategic planning and goal-setting adapted to new developments, thus starting a new cycle for continuous improvement.” (ibid., 13)

Concerning the quality criteria already listed above, the following allocation can thus be made (Figure 4):

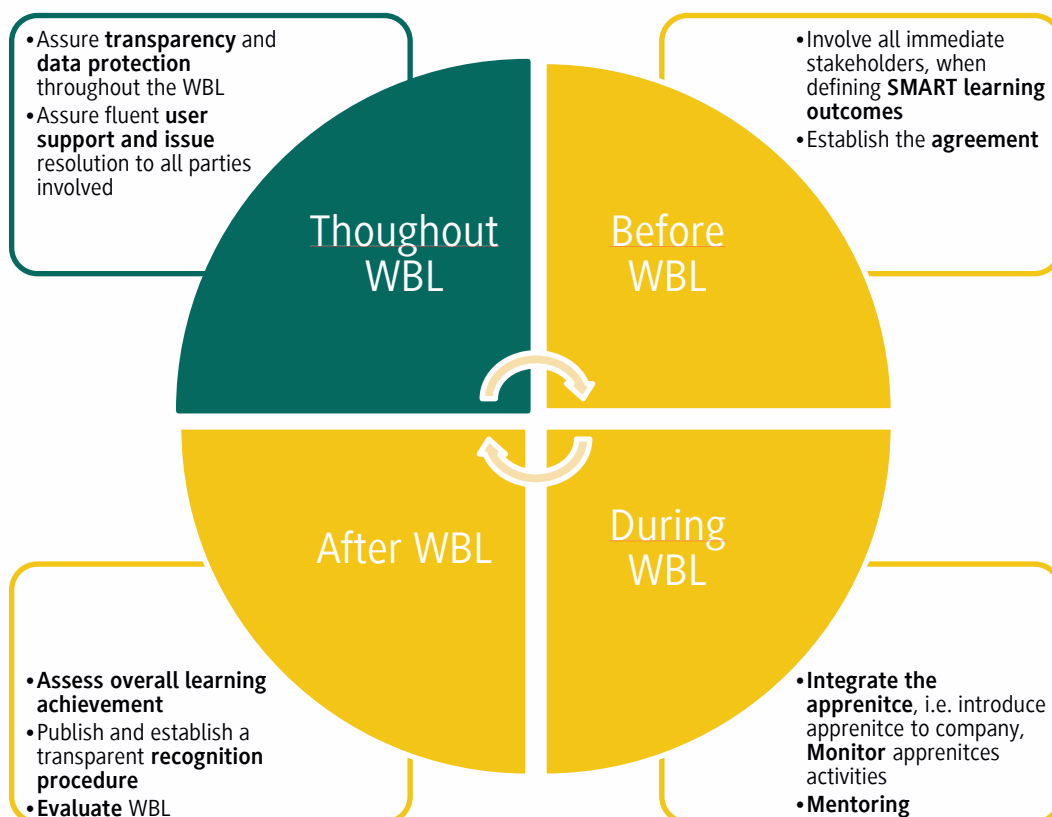


Figure 4: Allocation of the quality criteria (ApprenticeshipQ project).

Some quality criteria can be assigned to several steps in the cycle. There is no clear differentiation between the steps. At which point the respective quality criteria are to be assigned depends also on the specific measurement indicators used.

It should also be noted that all steps require prior planning.

A supplement to the PDCA cycle is the MERI compass (see Figure 5, see Cedefop). It assumes that the development of a quality culture is strongly influenced by soft skills, based on the human factor. These soft skills are presented in the MERI cycle as complementary to the hard skills used in the PDCA cycle. Thus, the MERI cycle refers primarily to the creation of an internal quality culture. In addition to the PDCA cycle activities, a quality culture is formed mainly through human relationships, which are characterised by mutual respect and encouragement. The following points for strengthening interpersonal relationships within the organisation can be identified from the MERI cycle:

- “(a) motivate people and mobilise resources for improvement;
- (b) appreciate and esteem engagement of staff and stakeholders;
- (c) reflect and discuss assessments, evaluations and opinions of staff and stakeholders;
- (d) inform and inspire appropriate improvement.” (Cedefop, 2015, 98)

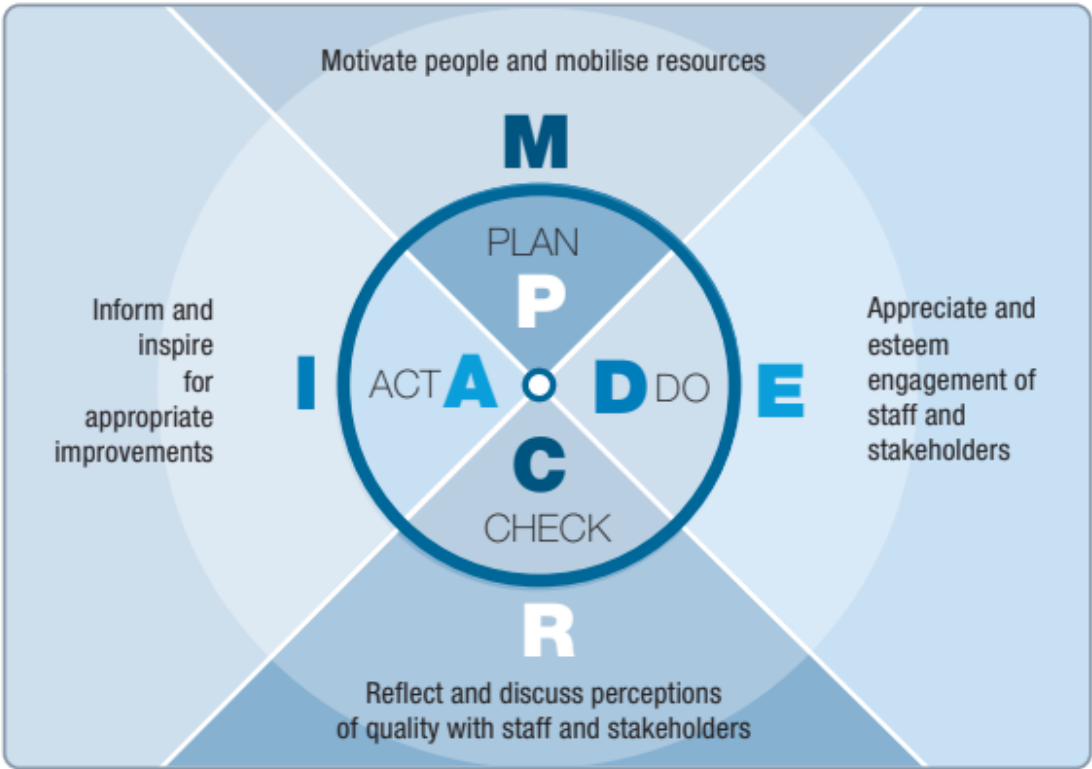


Figure 5: MERI cycle (Cedefop 2015, 99).

Although the quality criteria and their measurement indicators do not specialise in soft skills, some of the suggestions for this point can be taken from some of the listed criteria. Especially

the quality criteria, which promote exchange between the educational institution and/or placement provider and apprentice (No. 19, 25, 29, 30), strengthen the soft skills. A relationship of trust is established, which also forms the basis for internal quality management. Feedback can be obtained and passed on more easily; changes can be implemented more easily and with more trust.

Generally, the PDCA cycle is a concept for continuous improvement of processes within the organisation. The "Act" phase is the most important one. After the completion of a project, the cycle then starts again for further improvements (Sokovic et al., 2010, 477f.).

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About the ApprenticeshipQ Project and this publication

The lack of work experience and the skills mismatch between labour demand and supply are two of the greatest challenges for young people to transition from the world of education to the world of work and a promising way to face those challenges are apprenticeships. To support them, the ApprenticeshipQ Project aims to develop management tools that will help higher education institutions and employers to offer and direct high-quality apprenticeships and that can serve as a basis for the development of formal international standards and guidelines.

This handbook is intended to help educational institutions to improve the quality of their apprenticeship. With the help of a checklist and numerous examples, the listed quality criteria provide valuable advice on how to implement these criteria in your own institution.



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