

### **Quality Apprenticeships:**

### A Manual for Placement Providers

Version 2



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## **Table of Contents**

1.	Abbreviations	5
2.	Summary	6
3.	Introduction	7
4.	How to use this guide	.11
5.	Quality criteria for placement providers	.13
6.	From planning to implementation	.29
7.	Bibliography	.33
8.	Further Reading	.34

## 1. Abbreviations

ApprenticeshipQ	Mainstreaming Procedures for Quality Apprenticeships in Educational Organisations and Enterprises; Erasmus+ project
ECTS	European Credit Transfer System
EQAVET	European Quality Assurance in Vocational Education and Training
EQF	European Quality 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 own 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 (Interagency 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 projects 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.<sup>1</sup>

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

<sup>&</sup>lt;sup>1</sup> 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.<sup>2</sup> 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).

<sup>&</sup>lt;sup>2</sup> For further information please visit <u>https://apprenticeshipq.eu/practice-cases-collection/</u>

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 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.<sup>3</sup>

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 institution or towards the placement provider within the project in order to provide clarity.

These quality criteria were used to develop this guide to provide 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.<sup>4</sup>

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 institution, 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 20 to 30. An overview of all 30 quality criteria can be found in Figure 2 and in the one-pager on page 28.<sup>5</sup>

<sup>&</sup>lt;sup>3</sup> For further information please visit <u>https://apprenticeshipq.eu/a-requirements-standard-survey/</u>

<sup>&</sup>lt;sup>4</sup> For further information please visit <u>https://apprenticeshipq.eu/satool</u>

<sup>&</sup>lt;sup>5</sup> For guide for educational institutions please visit <u>https://apprenticeshipg.eu/manuals/</u>

Responsibility of the educational	Responsibility of the placement		
institution	provider		
1. Involvement of Stakeholders in	20. Preparation for the Apprenticeship		
Designing Learning Outcomes	21. Identifying Mentors		
2. Definition of SMART Learning	22. Establishing the Agreement		
Outcomes	23. Matching Apprentices' with		
3. Transparency	Placements		
4. Definition of Standards for	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		
Placements	25. Integration of the Apprentice		
5. Identification (finding) of Placement-	26. Mentoring		
Positions	27. Records of Apprenticeships		
6. Capacity Building for SMEs	28. Assessment of Learning		
7. Management of Placement-Supply-	29. Evaluation of Process		
Database			
8. Data Protection	h h		
9. Establishing the Agreement	<mark>dyt</mark>		
10. Matching Apprentices' to Placements			
11. Monitoring of SMEs Activities			
12. Monitoring of Apprentices Activities			
13. User Support and Issue Resolution	it it		
14. Evaluation of Apprenticeships			
15. Assessment Design			
16. Performing and Monitoring the			
Assessment			
17. Grading			
18. Certification and Recognition			
19. Complaints and Appeals			
30. Quality Management Procedures			

Figure 2: Quality criteria of apprenticeships (ApprenticeshipQ project).

## 4. How to use this guide

The eleven quality criteria for placement providers 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 helps to identify documented information already in place as well as possible opportunities for improvement.

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

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 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 company concerning to 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 placement providers

The purpose of this guide is to analyse the existing quality management documented information and to equip placement providers and in particular placement providers, 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. The first 19 quality criteria are led by the educational institution.

#### **20. Preparation for the Apprenticeship**

Before an apprentice is starting at a placement provider the apprenticeship itself needs to be planned not only time-wise but also documented information need to be in place to have a maximum return on investment.

#### **Measurement indicators**

Does the placement provider provide a model contract defining the work conditions?

Has the placement provider systematised the inclusion of the apprenticeship positions in the company's structure (e.g. through an organigram, job description, or similar)?

Has the placement provider a robust institutional and regulatory framework?

Does the placement provider have a financial plan and/or allocation for apprenticeships?

Does the financial plan have specific resource allocations for:

mentors, specifical reimbursement of the workload financially and time-wise (e.g. bonuses for mentors, percentage of FTE dedicated to mentorship)?

apprentices, including:

wages

social benefits, including insurance

health and safety infrastructure?

Does the placement provider provide a model contract defining the work conditions?

Does the placement provider provide Information/ advice/ guidance (IAG) manuals, including:

communication between HEI & placement provider?

clear learning and development structures?

Does the placement provider have the necessary capacity to host the apprentice (resource allocation), including:

personal (supervisor/mentor)

infrastructure (office space)

equipment

Does the placement provider have recruitment procedures for apprentices? (jointly with education provider or separately; existing guidelines?

Does the placement provider have a risk management plan including:

identification of risks?

analysis of the severity of their consequences?

analysis of the likelihood of their occurrence?

proposed measures to avoid those risks?

**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. Due to its strong training and development culture, this placement provider developed an inhouse quality handbook for WBL / apprenticeships.

Form 20: Example of an Application for Practical Training

#### **21. Identifying Mentors**

Mentoring is an important quality criterion as it ensures the transfer of knowledge between an experienced and an inexperienced person. However, appropriate persons need to be identified as mentors.

#### Measurement indicators

Does the placement provider has documented information for selecting mentors, including a description of their required:

technical competences?

clear management responsibilities?

pedagogical mentorship competencies?

minimum work experience?

Does a communication structure between the placement provider and education institution exist, including:

regular formal meetings?

set SMART learning outcomes between educational institutions & placement providers?

Does a communication structure between the placement provider and the apprentice exist, including:

quick response time to (informal) communication?

documented information?

apprentice feel supported by a mentor?

Does the placement provider has documented information for training mentors?

Does the placement provider has documented information for evaluation/appreciation mentors?

**Example:** The Engineering faculty of Deusto University offers different kinds of apprenticeships to involve and integrate apprentices' and professors in the companies. At this placement provider, a tutor is nominated to coordinate and assist the apprentice's development and learning. However, before nominating a tutor, the placement provider takes part in an initial four-day training session offered by the university.

Form 21: <u>Material and Staff Conditions for Practical Education of Students in Higher</u> <u>Vocational Education</u>

#### **22. Establishing the Agreement**

An agreement between stakeholders should be established to document the arrangements within the apprenticeship, which are beneficial for all stakeholders. These should be prepared, discussed, and signed in consultation with all stakeholders.

#### **Measurement indicators**

Has the placement provider defined an approval workflow for the contract which defines who will develop, review, and approve which document at which stage?

Is there a formal agreement/contract in place, including:

Defined time of work, salary, crisis management, work place, learning outcomes, mentor, communication, work plan and a clear link to the curriculum?

**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 22: Apprenticeship contract

#### 23. Matching Apprentices with Placements

During WBL, apprentices can apply and develop subject knowledge and skills in a professional environment. Furthermore, apprenticeships provide a 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 and placements is completed carefully.

#### **Measurement indicators**

Is there a list of requirements for all three stakeholders?

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

**Example:** Magna Steyr is covering the whole bandwidth of powertrain technologies – from ICE to plug-in hybrid to purely electric vehicles. Their emphasis is to collaboratively build-up dual study programs of "production technology and organisation" from scratch. Therefore, the placement provider publishes their offer on apprenticeships, where interested apprentices can find the subject, the place, and requirements for the WBL. The apprentice has to apply directly to the placement provider and conduct an interview. The placement provider/ department of the placement provider selects the preferred apprentice.

Form 23: Documented information on Matching Apprentices with Placements

#### 24. Conditions of the Apprenticeship

Before an apprentice starts a WBL phase, documented information must be available to provide the apprentice with information about the conditions and the course of the apprenticeship.

#### **Measurement indicator**

Has the placement provider established a documented information for describing the placement and its conditions to apprentices and educational institutions?

**Example:** Orona is a Spanish elevator and escalator manufacturer offering apprenticeships, which integrate the apprentice in multi-disciplinary work teams. The HR department and the technical departments of this placement provider define the technical and transversal competences needed and which learning outcomes shall be developed during the apprentice.

Form 24: Documented information on Conditions of the Apprenticeship

#### **25. Integration of the Apprentice**

Successful integration takes place when the apprentice feels that he or she is part of the placement provider and his or her time and effort is appreciated.

#### Measurement indicators

Has the placement provider established a documented information for personally presenting the placement to nominated apprentices?

Does the placement provider has documented information for selecting apprentices?

Has the placement provider assigned, to a member of their staff, the responsibility for communication with the educational institutions related to the apprenticeship?

Does the placement provider has documented information to introduce the placement provider to each apprentice?

Does the placement provider has documented information to introduce each apprentice to their staff?

Does the placement provider have a handbook to introduce the apprentice to the placement provider and staff and the culture of the placement provider?

Does the placement provider has documented information for mentorship, specifying:

periodic teaching, training and/or demonstration sessions to be held by the mentor?

periodic feedback and evaluation activities?

Are support structures for the integration of the apprentice in place, such as

preparation of supervision tasks?

knowledge about study content?

an orientation phase for the apprentice?

formal review meetings, its participants and timeline?

**Example:** DM Drogerie Markt D.O.O. is a multinational drugstore company, which puts great emphasis on the reception of new apprentices. This placement provider firstly presents the apprentices' the new environment, co-workers, and internal rules. Once familiar with this, apprentices' begin with the deployment program that is individual for each department. The mentor monitors, advises, directs, gives feedback, and helps apprentices' on their way to independent work.

Form 25: Orientation Plan Apprentice

#### 26. Mentoring

To integrate apprentices into the placement provider, mentoring is vital. Furthermore, the cooperation between experienced persons and an apprentice is beneficial due to valuable transfer of knowledge and skills. Compared to quality criteria 21, here the focus is on the implementation of mentoring.

#### Measurement indicators

Does the placement provider has documented information to inform apprentices in advance of their expected work?

Has the placement provider established a plan for each placement, including:

take into account training frameworks and module manuals?

integration of study content in the practical phase?

the general objective of the placement?

exchange with the education provider?

set of specific tasks with clear outcomes to achieve that objective, such as:

documentation of training & qualification in a work schedule?

documentation of qualification results and competence development in the learning process?

involvement of apprentices in business processes?

**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 and sustainability, energy, and advisory services. At this placement provider, trained mentors and WBL assessors are crucial to the success of the apprenticeship programme and graduate management scheme. Mentoring is viewed highly within the company, and 'accreditation' leads to a rewards bonus. Mentoring culture reinforces the overall culture of the company – its ethics and values. Seeking to develop well-rounded individuals and good team players.

Form 26: Questionnaire for Mentors of Practical Training in the Organisation

#### 27. Records of Apprenticeships

Records of apprenticeships are important to document the learning outcomes in combination with a training plan.

#### Measurement indicators

Is there a learning plan/schedule at the workplace, including:

information about roles and functions?

learning content defined?

apprentices' diaries to record experiences and reactions?

**Example:** Volksbank Heilbronn eG is a cooperative bank based in Heilbronn. This placement provider developed their learning outcomes and training plans by applying the quality handbook developed by the IHK (Chamber of Industry and Commerce) to ensure the theoretical phases at the educational institution and the practical phases at the company are closely interlinked.

Form 27: Apprentice's Report on Progress and Implementation of Practical Training

#### 28. Assessment of Learning

Assessment of learning is an important and critical step in the learning process to determine whether the learning outcomes have been met. Both sides can benefit from feedback discussions.

#### **Measurement indicators**

Is there a standardised evaluation process in place, including:

regular feedback talks?

assistance to apprentices in the organisation of examination dates & services?

monitoring the programme, has a process of evaluation (apprentice/placement providers)?

**Example:** *IKERLAN is a research centre for the transfer of technological knowledge. This placement provider aims to help apprentices' to find his or her vocation or preferred field of work by providing apprenticeships. To support the apprentice's achievement, the nominated tutor is evaluating the apprentice every 15 days with continuous feedback conversations. This evaluation is necessary for the development and coordination of the learning plan.* 

Form 28: Practical Assessment in Dual Studies

#### **29. Evaluation of Process**

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

#### Measurement indicators

Is there a standardised evaluation process in place, including:

recognition of difficulties & conflicts in the practice phase and bring about solutions?

supervision of project and graduation work within the placement provider?

monitoring the programme, have a process of evaluation (apprentice/placement providers)?

Does the placement provider have documented information for dealing with internal (staff) complaints and suggestions?

**Example:** The Zavod Traven Pisari Pri Gračišču is a micro company in Slovenia. This placement provider applies the PDCA quality assurance system to evaluate the apprenticeship process, according to the agreed plan of the educational institution and the expectations of the apprentice.

Form 29: Documented Information on the Evaluation Of Process "Apprenticeship Scheme"

#### **30. Quality Management Procedure**

Quality management documented information supports the coordination of work-based learning by directing the activities during the apprenticeship to meet the needs of all stakeholders and to improve apprenticeship's effectiveness and efficiency on a continuously level.

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?

the 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 and sustainability energy. 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	
Definition of SMART Learning Outcomes	
Transparency	
Definition of Standards for Placements	
Identification (finding) of Placement- Positions	
Capacity Building for SMEs	
Management of Placement-Supply- Database	
Data Protection	
Establishing the Agreement	
Matching Apprentices' to Placements	
Monitoring of SMEs Activities	
Monitoring of Apprentices Activities	
User Support and Issue Resolution	
Evaluation of Apprenticeships	
Assessment Design	
Performing and Monitoring the Assessment	
Grading	
Certification and Recognition	
Complaints and Appeals	

#### **Responsibility of the placement provider**

Preparation for the Apprenticeship	
Identifying Mentors	
Establishing the Agreement	
Matching apprentices' with Placements	
Conditions of the Apprenticeship	
Integration of the Apprentice	
Mentoring	
Records of Apprenticeships	
Assessment of Learning	
Evaluation of Process	

# 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)

In relation to 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 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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## 8. Further Reading

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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 placement providerss 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 placement providers 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 placement provider.



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