



Quality Apprenticeships

Development of manuals

Output 4 and 5

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1 Background

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.

Thus two manuals were developed, one for educational organisations and one for placement providers, particularly small and medium-sized enterprises (SMEs). The development process of the manuals and the finished versions are described in more detail in the following chapters.

In order to develop useful manuals, these were tested and reviewed in several steps with different stakeholders in the initial stage (Peer Learning Workshops, Iterative Reviews, Piloting). The manuals are supplemented by documented information that provides an example of the respective implementation. In the last step, the manuals were translated into the different languages of the project partners, German, Slovenian, Portuguese and Spanish, in order to ensure a broad use of the manuals.

2 Manuals

Based on the identified quality criteria of Output 3, first drafts of an apprenticeship quality management manual were developed by DHBW and its co-authors KIC, AoC and ESTG-IPP, one for educational institutions and one for placement providers. These manuals were partly based on the CEDEFOP manual for HVET providers. The focus of the manuals was to provide organisations with a set of quality criteria but also guidance on how to measure these criteria and how to implement these. Therefore, the manuals include examples on how organisations have implemented the quality criteria as well as documented information, which organisations can download and adapt to their requirements.

In order to develop helpful manuals, these were tested and reviewed in several steps with different stakeholders in the initial stage. These stages are described in more detail below:

2.1 Workshops

This first draft of the manuals were evaluated with HVETs, Universities of Applied Sciences, SMEs and the Chambers of Commerce in Germany and Slovenia. The feedback from these small workshops fed into the development of the second draft of the AQM manual. Since the consortium took a broad definition of apprenticeships as a basis for the project, the Chambers of Commerce served as an important input supplier for apprenticeships relating to training outside the higher education sector.

2.2 Peer-Learning Workshops

Following initial authoring, the manuals were subject of a two-day national feedback workshop organised using a peer learning approach amongst members of the consortium.

“The term peer learning refers to situations where peers support each other in learning processes. [...] Peer learning is the acquisition of knowledge and skill through active helping and support among peers who are equals in standing or matched companions. Peer learning occurs among peers from similar social groupings, who are not professional teachers, helping each other to learn and in doing so, learning themselves” (Topping and Ehly 1998).

As quantitative indicator the number of participants were analysed, as qualitative indicators the position, field, knowledge and interest of participants were taken into account.

In the middle of the planning and realisation of these workshops, the spread of Covid-19 caused the consortium to re-plan and organise this activity. Some of the workshops were therefore held as an online meeting instead of face-to-face meetings.

Day 1 consisted of a two-hour workshop with national QA experts [DE/SI were supported by the Chambers of Commerce] with the aim to gather feedback about the first draft of the manuals by outlining the following points:

- Short Introduction to the AppQ project.
- Explaining the purpose and structure of the Peer Learning Workshop.
- Conducting the Peer Learning Workshop.
- Summarising key points.

The workshops were conducted with 41 participants from educational institutions, 29 from placement providers/SMEs and 13 students. In total, 83 people discussed with the ApprenticeshipQ consortium their impressions of the manuals within the Peer Learning Workshops. The second day of the Peer-Learning Workshops was conducted as an online workshop with the title “Smart E-Quality@WBL” with a total of 51 participants.

As part of the Peer-Learning Workshops EURASHE organised a round table in Brussels with a total of 24 persons from different higher education institutions from various countries, which discussed with EURASHE and VSS the quality criteria and the first draft of the manuals.

The comments from the peer learning workshops were collected in the ISO-based table (see Annex) and subsequently discussed in the consortium.

2.3 Iterative Review

For the iterative review based on panels, the consortium developed a review template, which was sent out to quality experts, apprenticeship managers at HVET institutions and SMEs for feedback. In addition, workshops with stakeholders were conducted for validation purposes. To get a more in depth perspective on the manuals, the iterative review was conducted with WBL-managers with SMEs and Quality Assurance managers at educational institutions. The participants either joined workshops or analysed the manuals and completed a review template. After all panels were completed, the consortium analysed the feedback and embedded the changes into the manuals. The iterative reviews were carried out with 74 participants in total.

2.4 Piloting

A piloting is conducted to test questions of acceptance, potential, practicality and suitability with the aim of optimisation. Similarly, a simulation is an approximate imitation of the operation of a process or system with the aim to gain an insight into their functioning, collect data to improve the project.

In this step, the two manuals were presented in total in ten educational institutions and seven placement providers. The aim was validating that the recommendations in the manuals lead to a successful integration of the quality criteria into the culture and process of the

organizations. This aim was originally intended to be implemented by the educational institutions and placement providers applying the manuals in real working life during the apprenticeships training phases. Unfortunately, this implementation was not possible due to the situation with Covid-19. Lockdown, schools and companies closed and in some countries apprenticeships programmes are cancelled for the rest of the year. The consortium waited for the situation to change; however, with the project coming to an end, the piloting needed to be conducted. As a real piloting would be unacceptable to engage as it could be dangerous and the acceptance was doubtful, the consortium agreed to simulate the piloting, as simulations are used when the real system cannot be engaged.

In order to support the participating experts in conducting the simulation, KIC created an online questionnaire for educational institutions and placement providers. The questionnaires contained the quality criteria as well as the measurement indicators. These gave the opportunity to evaluate the organisations with the help of a checklist. The answer options were yes/partially/no and related to the implementation of the individual measures. By depositing the email address, the experts received their answers, so that a subsequent review were also possible.

The piloting process was described in the following table:

| | |
|-------------|--|
| Goal | Gather feedback and validate the manuals |
| Description | <p>1. Step: Selection of the most appropriate HVET/SME.</p> <p>2. Step (via telephone/video conference ~ 60 minutes; before the start of the two weeks' simulation)</p> <p>Introductory session with the selected HVET/SME. Set a timeline of two weeks. Present the quality criteria and measurement indicators systematically. Offer contact and consultation possibility in case of any difficulties. Tick the appropriate box (yes-no-n/a) to indicate, if the quality criteria and measurement indicator is applied. If the answer is yes, ask for evidence. If the answer is no, this is an opportunity for improvement.</p> <p>3. Step (two weeks of simulation in HVET/SME)</p> <p>HVET/SME analyse and tick the appropriate box (yes-no-n/a) to indicate, if the quality criteria and measurement indicator is applied. If the answer is yes, ask for evidence. If the answer is no, this is an opportunity for improvement. HVET/SME are welcome to submit any supporting documents.</p> <p>4. Step (via telephone/video conference ~30 minutes; two weeks after step 2)</p> |

| | |
|--------|---|
| | <p>Discussion and feedback collection (e.g. What has changed since the second session. Which changes were conducted and how did they change it. Do they find the digital manuals useful? What was the overall experience?).</p> |
| Output | <p>Please add any comments into the ApprenticeshipQ Manual Validation table.</p> <p>Collected data in step 2 are gathered in the digital manual (provided by KIC). Comments collected during step 4 can be added in the validation table.</p> |

3 Revision and Publication

The feedback from the peer learning workshops, the iterative review and the piloting was discussed in the consortium and subsequently incorporated into the manuals. Almost 120 comments were received (already adjusted for duplications), covering various areas of the manual. For example, the structure of the manuals, difficulties in understanding some measurement indicators or additions to measurement indicators, general wording etc.

The comments were collected in an Excel file and the partners were asked to analyse them and indicate whether they agree or not with the comment or the resulting amendment or whether further clarification is necessary.

The consortium leader DHBW then summarised the responses in a traffic light system, so that in a joint online meeting the comments were first discussed, which entailed changes or had to be discussed about the further procedure. All necessary changes were then transferred by DHBW into the manuals.

3.1 Manual for educational institutions and placement providers

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

The quality criteria developed in the project are listed in a table format with the corresponding measurement indicators in chapter 5. The Quality criteria with their measurement indicators 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, and can therefore be found in both manuals.

Each criterion is supplemented by a short description and an example. The examples are taken from their project qualitative interview survey with numerous educational institutions and placement providers. 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. They do not intend to affirm themselves as the only way to address them. Different organisations may choose to address the criteria through different approaches that better fit their culture and other organizational and national particularities. Namely, national regulations should always be considered before deciding which tools to implement.

How these criteria can be implemented in the educational institution or at the placement provider/SME is explained in Chapter 6 using a PDCA (Plan-Do-Check-Act-Cycle) model. The manuals closed with its references and further literature.

3.2 Online Tool

The ApprenticeshipQ Online Assessment Tool is a semi-automated online checklist capable of guiding conformity assessment exercises towards the ApprenticeshipQ Quality Criteria and of producing objective reports of the results. It can be used to assess educational organizations who offer work-based learning and their partner companies, who provide the apprenticeship placements.

The Online Assessment Tool starts by identifying the type of assessment (as described above), its date and the parts involved (the organization being assessed and the organization acting as assessor, if different). It then contains all ApprenticeshipQ Quality Criteria in the form of questions organized as a checklist, with multi-choice answers reflecting the level of conformity (total, partial or absent). These can be complemented with descriptions of objective evidences, which can be commented by the assessors. The results of the data entered by all parts involved are automatically compiled, generating a report which reflects both quantitative and qualitative analyses:

- The status of conformity (global and/or criteria by criteria), illustrated by a graph using a LEAN colour code (green, yellow, red);
- List of objective evidences submitted (if any) and assessor comments to them (if any).

The ApprenticeshipQ Online Assessment Tool is web-based using WordPress technology and can be freely accessed via the ApprenticeshipQ Website, using the link: <https://apprenticeshipq.eu/satool>.

3.3 Translations

The final versions of the manual for educational institutions and placement providers were translated into German, Slovenian, Portuguese and Spanish by the respective partners and published on the ApprenticeshipQ website. As a result of the Spanish and German piloting, where the educational institutions and placement providers argued that the documented information would only be applied if these would be available in the national language, DHBW and MU decided to translate these procedures as well, which were published on the ApprenticeshipQ website.

The manuals in the national languages were distributed through the existing network of partners.

3.4 Evolution into a formal standardization document

The ApprenticeshipQ Quality Criteria contained in the two Manuals was presented to the Portuguese Standardization Technical Committee on Education (IPQ/CT 187) – and approved in consensus by unanimity to:

- a) Be published as a Guide by the Portuguese National Standardization body – Instituto Português da Qualidade (IPQ);
- b) Be submitted by IPQ to the International Organization for Standardization (ISO), after publication by IPQ, as a New Proposal (NP) for an International Workshop Agreement (IWA).

As a result of those decisions, the work item was included in the IPQ/CT 187 Work Plan for 2020, where it appears scheduled for publication by December 2020.

It is undecided, at the time of writing this report, if more than the ApprenticeshipQ Quality Criteria will be published, but it is a possibility as some formal standardization documents containing requirements, also contain guidance for use – e.g.. ISO 21001 for Management of Educational Organizations (ISO, 2018). At the least and considering similar projects such as IWA 35 - Quality of learning environments for students in healthcare professions — Requirements for healthcare education providers in care settings (ISO, 2020), it is expected that a terminology section, with terms and definitions is included. If that happens, some contents of the introduction section of the manuals might also be used as contributions.

More information on this process can be found at the IO3 report.

4 Outlook

In the first step of Work package 6, interviews from the following areas will be conducted to compare the manuals with various existing European and International Recognition Tools and Instruments:

- ECTS/ECVET
- ESG/EQUAVET
- ISO 21001
- Diploma Supplement
- European Qualifications Framework
- European Quality System for Apprenticeships

Based on the interviews a Harmonisation & Translation Guide will be developed, which will describe how these tools and instruments relate to the ApprenticeshipQ manuals. The feedback of the interviews will be used to eliminate general sources of error in the manuals.

Finally, this guide will include recommendations to decisions and policy-makers on how to mainstream adoption of the quality criteria and manuals, with the aim of integrating apprenticeships into quality management systems of educational organizations and placement providers throughout Europe.

5 References

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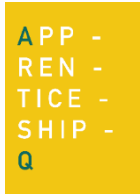
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Appendix

Evaluation form for Peer-Learning Workshops, Iterative Review and Piloting



ApprenticeshipQ Manual Validation – Changes suggested

Partner:

Date and Time:

Number of Participants:

| Stakeholder (1) | Country (2) | Manual (3) | | Type of Comment (4) | Comment/Rationale (5) | Proposed Change (6) | Decision (7) |
|--------------------|----------------|---------------|-----|---------------------------|-----------------------|---------------------|--------------|
| | | HEI | SME | | | | |
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Add lines as needed

Notes:

- (1) QEA=Quality Expert or Auditor; PHE=Provider of Higher Education; SME=Representative of SMEs; STU=Student; ALU=Alumni.
- (2) Use two-letter ISO country code of the Stakeholder proposing the change.
- (3) Indicate on which manual you are commenting on and on which page
- (4) ED=Editorial; TE=Technical.
- (5) Describe the comment made and the rationale for the change being proposed.
- (6) (Re) write the criteria with the change.
- (7) Approved; partially approved (describe changes to the proposal); Rejected (insert rationale for the rejection). Leave empty, this column is to register the decisions made by the consortium.

Evaluation form for Iterative Review

The quality criteria identified and validated in the ApprenticeshipQ project, including their measurement indicators, were transferred into two manuals, one for HVETs and one for SMEs, with numerous examples.

The manuals were created to provide HVETs and SMEs with a quality management procedure to establish and enhance high-quality apprenticeships.

The present template is used to collect standardised feedback by experts in the field.

| Quality Control Check | | Y/N | Reviewer recommendations/comments |
|---|---------|---------|-----------------------------------|
| Generic Standards | Minimum | Quality | |
| The structure of the manual is clear. | | | |
| Quality of text is good (diagrams; readability) | | | |
| Comprehensiveness is good (no missing sections; missing references; unexplained arguments) | | | |
| Usability is good (deliverable provides clear information in a form that is useful to the reader) | | | |
| The procedures are useful. | | | |
| Are there any procedures that are not useful? | | | |
| I can envision using the manuals in everyday business. | | | |

To what extent do you think the HVET/SME manual met the aims of the above defined aim?

Do you have any suggestions to improve the HVET/SME manual?

Date

Name of Expert

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.

In this publication, the work packages O4 and O5 and their results are discussed in detail. The developed manuals for educational institutions as well as for placement providers can be downloaded freely from the ApprenticeshipQ website.



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