

Erasmus+ - project Learning workshop „Sustainable environmental protection ”



Quality standards for the qualification concept for educational staff (Heike Arold)

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The quality standards for the qualification concept for educational staff for the design and implementation of learning workshops on “sustainable climate and environmental protection” were developed by Heike Arold for the project partner nordprojekte Kaufmann&Partner and in close cooperation with all project partners. The project partners developed possible quality standards at the national level and discussed them with experts and in the project consortium. Based on the results and analysis of the results, nordprojekte Kaufmann&Partner created the final quality standards and documented them.

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Introduction

Against the background of the objective of the Erasmus+-project “Learning workshop – Sustainable environmental protection” (LWS) to introduce trainees and skilled workers to the need for sustainable environmental protection and climate protection as part of their professional activities and thus to contribute actively to the climate and environmental protection in the world of work a general concept for a learning workshop as well as five vocational field-specific learning workshops on sustainable climate and environmental protection were developed. Thus the necessary know-how should be imparted in a practical manner. In order to provide the educational staff who should implement the learning workshops with the necessary tools for implementation (both methodological and content-related), a qualification concept was developed for them.

The basis for the development of the qualification concept and the learning workshops are the results of a vocational research investigation in the five partner countries (Germany, Austria, Poland, Slovenia and Spain) that were involved in the project. In addition to an extensive literature research, numerous case studies and expert discussions with the directly beneficiaries of the learning workshops were carried out, such as skilled workers and trainees from different vocational fields as well as with teachers and trainers. In addition to the identification of the necessary theoretical know-how for learning workshops that focus on practical and self-active learning, especially the work processes and procedures in the selected vocational fields were examined with a focus on the implementation of sustainable climate and environmental protection in the world of work. Therefore it could be identified what know-how skilled workers and trainees should acquire with regard to sustainable climate and environmental protection in the course of their professional activities and what requirements are placed on them in this regard.

In order to make the qualification of the educational staff who are supposed to implement the learning workshops comparable across the EU and to ensure a high quality of qualification, existing quality standards in the national VET-systems of the five above-mentioned partner countries and here explicitly with a focus on the qualification of teaching staff are analyzed and then possible quality standards are developed for the newly developed qualification concept. After that the results were discussed with national experts and in the consortium. The use of appropriate quality standards in the qualification of educational staff should ensure that they acquire the same knowledge and methodological skills across borders and that they will or can use these effectively in the qualification of skilled workers and trainees by the use of learning workshops.

When finalizing the quality standards, particular emphasis was placed on ensuring that the quality standards could be implemented and adhered to all EU-countries. Country-specific circumstances due to different VET-systems were not taken into account. However, the following quality standards can be supplemented by country-specific adjustments. A waiver of individual quality standards that are listed below should be avoided in view of the EU-wide comparability of the qualification.

In order to ensure the comparability of the qualification of educational specialists after the qualification concept has been transferred to other EU-countries, the implementation of the qualification should be based on the following quality standards.

The identified and listed below quality standards relate to three different areas of the qualification concept and its implementation. Here are to be mentioned:

1. Input quality standards
2. Process quality standards
3. Output quality standards

The input quality standards describe, among other things, the resources and the framework conditions, the process quality standards refer to the didactic concept and the output quality standards refer to the objectives to be achieved, competencies and learning/qualification successes.

1. Definition of „quality“ and „quality standards“

Since the terms “quality” and “quality standards” are defined differently in the EU-countries, at first a brief definition of the terms should be given. These can therefore be better classified as such, but also in connection with their necessity as a basis for the qualification concept for educational staff. A clear definition and explanation should also help to ensure that the quality standards are adhered by the institutions that implement the qualification concept for educational staff. The Compliance with the quality standards in the qualification of educational staff also means that the learning workshops on sustainable climate and environmental protection with a focus on the working and professional world are ultimately implemented in a targeted manner in terms of content and methodology. After the qualification, it can therefore be assumed that the qualified specialists (teacher, trainer) have the necessary know-how to plan the content, to organize and to implement learning workshops.

The term quality (Latin *qualitas* = nature, state, condition) can be used to describe the sum of all characteristics of an object, system or process that evaluate its quality. According to the standard DIN EN ISO 9000:2015-11 (the valid standard for quality management), quality is defined as “the degree to which a set of inherent characteristics of an object meets requirements”. This definition was replaced by the formulation of DIN EN ISO 8402:1995-08, the previous quality management standards. Accordingly, quality is “the entirety of characteristics of a unit based on the fact that the characteristics meet specified and assumed requirements.” Units are products, services, concepts, designs, software, workflows, procedures and processes (Source: <https://de.wikipedia.org/wiki/Qualit%C3%A4t> , access to: 27.1.2024).

In the field of education and vocational training, the term “quality” is an open term that does not only refer to the structures. It includes both the content and the results to be achieved by using a teaching method, a curriculum, a qualification or other instruments. In order to achieve a certain level of quality in a qualification and to ensure that it is successfully implemented, it must be based on different standards, which are called as quality standards.

On the one hand, they determine the framework of the qualification and, on the other hand, they should determine the process of implementation of the qualification (e.g. teaching methods to be used) insofar as these are relevant for the success of the qualification. Furthermore, they describe the overarching and to be achieved objective or the result of the qualification.

In this regard, however, it should be noted that the term “quality” does not represent an evaluation, even if an evaluation of “good” or “bad” is usually made at the end. For example, if a qualification corresponds to the objective and fulfills its purpose, it is generally named as a “good” or “successful” qualification. If it does not fulfill its purpose, it is called as “bad”. In general, however, the quality of a qualification is difficult to measure. The quality standards used represent measurable criteria such as the achievability of the specified teaching/learning objectives of a qualification or the framework of the qualification.

With regard to the measurability of the quality of a qualification, it should also be noted that this cannot only be attributed to the successful completion of a qualification. A positive qualification result does not necessarily equate to a “good quality” of a qualification, because numerous individual requirements that the individual being qualified have, among other things, influence the successful result.

In initial training and further education, one generally speaks of “good quality” when the defined requirements for a qualification and its objectives are achieved. The higher the degree of compliance with the specified requirements and the more (sub-) objectives are achieved, the better the quality of the qualification can be assessed. In order to ensure the measurability of quality, it is necessary that the established quality standards of a qualification are adhered to by the implementing institutions. The established quality standards here are an integral part of the new qualification and are valid regardless of a region or a VET-system. They contribute to ensure that the qualification meets certain requirements and that certain guidelines are adhered during its implementation.

The following quality standards are merely quality standards that can be taken into account equally in all participating countries. Country-specific aspects and criteria required in different countries (due to the peculiarities of the different VET-systems) were not taken into account, because the qualification concept for educational staff should initially be based on standards that can be maintained across the EU. Insofar country-specific aspects are relevant to the implementation of the qualification and must be adhered nationwide, these can be added to the list of the general quality standards below.

2. Importance of quality standards with regard to the qualification concept

The qualification concept for educational staff, which is intended to implement learning workshops on sustainable climate and environmental protection with a focus on the working and professional world as part of initial training and further education, aims to be used equally across the whole EU.

It is intended to ensure that the educational staff, regardless of the different VET-systems, are familiarized with learning workshops and that the trainers/trainers are enabled to design and implement it. In addition, they should be able to develop the required teaching content independently and especially to identify profession-specific teaching content that is relevant across countries in the vocational fields or professions that are considered. Thus it should be ensured that the educational staff in the different EU-countries are able to develop and design comparable learning workshops, e.g. with regard to individual vocational fields or professions, i.e. learning workshops with the same objectives.

Ultimately, the aim is to ensure that the topic of sustainable climate and environmental protection is firmly established in the initial training and further education in relation to certain vocational fields or individual professions in order to comply with the political and social demands and announcements for more climate and environmental protection in all areas of life. To do this, the teaching staff must first be qualified so that they can then meet these requirements and face the challenges of politics and society. In order to ensure this, the qualification is based on quality standards that can and must be taken into account independently of different VET-systems. And they must contribute to increasing quality of the qualification of the educational staff.

The need to establish appropriate quality standards for such a qualification in Europe is not only based on the aspect of increasing quality, but also on cross-border comparability in Europe. The quality standards provide the qualification with a uniform framework across Europe, so that the comparability of the performances that are provided in the context of the qualification is possible. Furthermore, comparability with regard to the cross-border labour market plays a crucial role in many regions in Europe (including in the partner countries). The quality standards make it possible to accept the acquired competencies of the educational staff cross-border.

3. Input quality standards – resources and framework conditions

The input quality standards describe the resources and the framework conditions of the qualification. This means that they cover all aspects that comprise the framework of the qualification - i.e. the so-called "hardware" of the qualification - such as the requirements and prerequisites for learners and teachers/trainers (know-how, experience in relation to the learning content, etc.), number of participants, the teaching/learning location, required equipment, time frame, possible support through networks and collaborations, exchange with experts, teaching/learning materials, etc.

No.	Title	Description
1	Number of participants	<p>The number of participants taking part in the qualification for educational staff should be limited to an appropriate number (min. 6 - max. 10) against the background of the objectives and resources as well as the teaching methods to be used.</p> <p>If the qualification is used to qualify pedagogical staff with a completed training or vocational trainers in the form of a further training measure, the number of participants should be limited to a maximum of 10.</p>

		<p>If the qualification takes place as an integral part of the basic training/study of educational specialists (e.g. prospective teachers, pedagogues), then the number of participants can be unlimited. The qualification must then be adapted to the number of participants in terms of structure and content.</p>
2	Requirements for participants	<p>The qualification should be an open educational offer that is accessible to all interested persons - both for pedagogical specialists who have little methodological and didactic knowledge and for those with extensive teaching experience.</p> <p>If the qualification is offered as a further training measure, then the participants' level of knowledge and experience with the use of learning workshops or the topic of sustainable climate and environmental protection must be taken into account and then the scope and depth of the content must be adapted accordingly.</p> <p>If the qualification is offered as part of the basic pedagogical training/study, then the previous knowledge must be taken into account based on the respective curricula of the prospective teachers, for example.</p>
3	Taking into account the participants' previous knowledge and experiences	<p>The previous knowledge and experience of the participants must be identified in advance of the qualification and taken into account in the qualification regardless of the type of participants.</p>
4	Transparency	<p>All relevant content (list of core content) as well as the objectives of the qualification must be made transparent online via the qualification institution's internet platform or prospective teachers should be able to find the content in their syllabus.</p>
5	Qualifications of the trainers/ teachers	<p>The qualification must be carried out by trainers/teachers who are familiar with the "learning workshop" teaching method as well as scientific research methods and who have knowledge of sustainable climate and environmental protection with regard to the working and professional world.</p> <p>The trainers/teachers must have pedagogical experience and social skills with regard to the training of pedagogical specialists or prospective teachers.</p> <p>The trainers/teachers are selected by the qualifying institution through a special selection and award process based on certain criteria.</p>

6	Core task of the qualification trainers/teachers	Their core task as part of the qualification should primarily relate to an advisory and accompanying role in the learning process, after technical and theoretical instructions and imparting basic knowledge.
7	Teaching and learning place	<p>The learning place should be easily accessible, if possible barrier-free and by public transport.</p> <p>It should have all the necessary facilities and equipment to be able to carry out an exemplary learning workshop.</p> <p>It should be technically equipped with sufficient digital devices (e.g. PCs, tablets) and appropriate to the number of participants in order to be able to use internet sources, among other things.</p>
8	Qualification time frame	<p>The time frame of the qualification should include a minimum of 16 training hours (at least 2 days).</p> <p>Depending on the teaching content, the duration of the qualification can be adjusted and the scope of time can be extended - i.e. the scope of time can be designed flexibly to a limited extent.</p> <p>The proportion of theoretical and practical units must be determined and made transparent before the qualification begins.</p>
9	Equipment	<p>The equipment should be adapted to the teaching content, the participants and their experiences.</p> <p>The participants should be informed about relevant equipment that they need, especially for the practical part of the qualification (e.g. documents, work/safety clothing, tools, PCs); appropriate equipment must be provided if necessary.</p> <p>For practical tasks, equipment close to the working or professional world should be available in order to implement and solve such tasks as realistically as possible.</p>
10	Sustainable framework conditions	The qualification should be carried out under sustainable conditions, including travel, resources used, meals, etc.
11	Exchange between teachers	If several teachers carry out the qualification, there must be a regular exchange between them and the content must be coordinated.
12	Teaching and learning materials	The teaching and learning materials must cover all identified and defined teaching content of the qualification and be freely available to all participants.

		<p>The sources for digital teaching and learning materials must be named and made accessible.</p> <p>The teaching and learning materials must be selected in such a way that they contribute to achieving the learning objectives and consolidate the know-how sustainable and make it usable and expand or improve the skills of the participants.</p> <p>The general measure concept for learning workshops on sustainable climate and environmental protection should be definitely used as teaching material.</p>
13	Module selection	It should be possible to choose between different teaching modules (just to compensate for knowledge gaps) or to complete the entire qualification.
14	Structure of the qualification	The structure of the qualification is fixed and should be made transparent for all participants.
15	Cooperations and networks	Close connections to chambers, professional associations, etc. must be demonstrated for possible practical tasks and the later application of the acquired know-how.
16	Inclusion of national specifics regarding legislation and the VET-system	The qualification must correspond to the national specifics for trainers/teachers, i.e. it must take into account national legislation regarding education and the peculiarities of the VET-system in order to ultimately be accepted.

4. Process quality standards – didactic concept

The process quality standards refer to the didactic concept and the methodical implementation of the qualification. They include all aspects that determine the structure and implementation of the qualification such as procedures and processes. In addition to the basic structure, these include; used teaching and learning methods, practical tasks, but also feedback and discussion rounds, the use of performance tests or quality assessments and a final review of the acquired know-how.

No.	Title	Description
1	Defined basic structure	<p>The qualification or the modules should include both basic and contextual knowledge as well as specialist knowledge on work- or profession-related sustainable climate and environmental protection.</p> <p>The qualification should include basic knowledge about planning, organizing and implementing learning workshops.</p> <p>The learning content should be imparted in the form of modules that build on each other.</p>

		<p>The qualification should be structured in such a way that those being qualified will be able to acquire the necessary know-how about work- or profession-related sustainable climate and environmental protection independently in the future.</p>
2	Teaching methods	<p>At least three different teaching methods, which are also used in learning workshops, should be used in order to impart methodological diversity.</p> <p>Because team or group work is particularly used in learning workshops, these teaching methods should be used during the qualification in order to deepen the practice and advantages.</p> <p>All used teaching methods should be contemporary and enable and promote self-organized learning.</p> <p>All used teaching methods used should enable a coordination of theory and practice.</p>
3	Use of a learning workshop	<p>At least one part of the practical knowledge transfer must be imparted in the form of an exemplary learning workshop.</p>
4	Ratio of theory to practical parts	<p>The qualification should include a large proportion of practical exercises (including in the form of a learning workshop) in order to familiarize participants with the learning workshop instrument through practical experience and to use the theoretically acquired knowledge.</p> <p>The ratio between practice and theory should be between 2:1 and 3:1.</p>
5	Reflection on what has been learned	<p>There should take place at the end of each teaching unit a reflection on what is “new-refreshed-old/known” as well as on the achieved learning objectives in order to uncover deficits and clarify open questions.</p>
6	Relation to the specific work environment of the participants	<p>The specific working environment or professional field of the participants should be taken into account in the qualification (e.g. which target groups they will later train through learning workshops).</p> <p>Specific needs and interests of the participants should be taken into account.</p>

7	Verification of acquired knowledge	<p>The acquired knowledge and skills must be checked at the end of each learning unit (e.g. in a written, oral, practical form).</p> <p>The correct implementation of the acquired theoretical knowledge should be additionally checked as part of the practical tasks.</p> <p>The scope of the performance reviews must be appropriately adjusted according to the content to be checked.</p>
8	Final exam	<p>If there is an overall qualification with all modules, a short final exam on the acquired knowledge must take place at the end (written or oral).</p>
9	Overview of general core teaching content	<p>Those taking part in the qualification must be taught about general climate and environmental protection aspects in the world of work and career changes as a result.</p> <p>Those taking part in the qualification must be imparted basic knowledge of the meaning, benefits, design and implementation of learning workshops.</p> <p>As part of the qualification, participants should be able to identify teaching content independently and acquire know-how on sustainable climate and environmental protection in relation to specific vocational fields/professions.</p> <p>In particular, the connections between the individual content must be made clear to the participants.</p>
10	Conditions for successful participation in the qualification	<p>In order to receive a successful confirmation of participation in the overall qualification, they must completed at least four modules and, with regard to the module not completed, have to be proved if they have elementary knowledge of the relevant content.</p> <p>In order to receive a successful confirmation of participation in individual modules, the participants must, according to the qualifier's assessment, have understood the core content and be able to use it in practice.</p>
11	Evaluation of the qualification	<p>After the qualification, the participants are asked about their experiences, the skills of the teacher and the teaching methods and used materials. So in the case of deficits, it is possible to change the choice of teaching method or the teacher in the future.</p>

5. Output quality standards – objectives, learning/training success, certificates

The output quality standards refer to the teaching/learning objectives and successes as well as possible results that can be achieved by those being qualified at the end of the qualification. They include aspects such as options for adapting teaching/learning content, types of qualification and types of certificates.

No.	Title	Description
1	Adaptation of teaching content to national framework conditions and requirements	<p>The teaching content must be imparted as described in the qualification concept in order to ensure the comparability of the qualifications of educational specialists.</p> <p>Specific topics such as legislation, legal framework, regulations, relationship to the VET-system, training/occupation specifics, which may differ nationally, may be adapted to the national framework conditions.</p>
2	General and specific teaching and learning objectives	<p>General and specific learning objectives should be made transparent at the beginning of each teaching unit.</p> <p>The main topics and focal points of the qualification must not be affected by any adjustments.</p>
3	Methodological skills	<p>The participants know and are able to use all necessary teaching methods that come into play in a learning workshop, such as team/group work, techniques for presenting results, and self-organized learning.</p> <p>The participants are able to identify profession-specific content on sustainable climate and environmental protection with a reference to the world of work.</p> <p>The participants are able to implement a vocational field- or profession-specific learning workshop in its entirety.</p>
4	Legal knowledge	<p>The participants have acquired knowledge of legal hierarchies and the type of regulations and can classify them and know the principle of proportionality.</p>
5	Knowledge of the essential general climate and environmental protection aspects	<p>The participants have a comprehensive overview of various general climate and environmental protection aspects in relation to the world of work, such as resource conservation, nature conservation, CO² footprint, circular economy.</p>

6	Knowledge of vocational field or profession-specific climate and environmental protection aspects	The participants have specific knowledge of where sustainable climate and environmental protection comes into play in selected vocational fields/professions in order to develop an idea of what content can be identified for other vocational fields or professions.
7	Raising awareness for sustainable climate and environmental protection	The participants are sensitized to the issues of climate and environmental protection and know about the importance in the working and professional world.
8	Documentation of qualifications	The qualification must be documented continuously and in detail so that it can be traced.
9	Certificate	After completing the qualification, participants receive a certificate or confirmation of participation in which the learning objectives achieved are documented.
10	Dissemination	<p>The qualification is distributed and promoted via various channels.</p> <p>Successfully completed qualifications should be published in order to make them accessible to other potential participants.</p>

6. Outlook

The newly developed qualification concept for educational specialists for the design and implementation of “learning workshops on sustainable climate and environmental protection with reference to the working/professional world” is primarily a further training for educational specialists such as teachers and trainers in initial vocational training as well as teachers in vocational further training. It serves teachers and trainers who want to further train skilled workers in different professions through learning workshops in different vocational fields or professions on the topic of sustainable climate and environmental protection with reference to their working environment/processes.

Because the topic of sustainable climate and environmental protection in the participating project countries (and it can therefore be assumed that the situation is similar in other EU countries) is not even taken into account in the framework curricula of many initial training courses or it is only rudimentarily taken into account in the framework curricula and maximally integrated into other subject areas, it receives little attention from the educational specialists who are carrying out the initial training. For example, prospective vocational school teachers or teachers at special vocational schools are not explicitly familiarized with the topic as part of their studies/training. And trainers and teachers in vocational training and further education also have technical deficits in this regard. The situation is similar with the know-how on the use of learning workshops, their purpose, benefits as well as the planning and implementation of them. The knowledge about this varies from country to country and depending on the respective pedagogical training and vocational experience in the field of teaching and training among pedagogical specialists.

For this reason, it is important to qualify the trainer/teacher in view of the increasing demand for more climate and environmental protection in the world of work in the future. The rapid changes in the working and therefore professional world due to new materials, techniques and work processes as well as against the background of increasingly strict regulations, laws and ordinances result in a constant adjustment of the content of the qualification in the long term. This in turn could affect the quality standards that are listed here, so that these must be checked and, if necessary, adjusted or supplemented when the content of the qualification is adjusted.

In order to ensure a cross-country comparability of the qualifications of educational specialists who should design and implement learning workshops on sustainable climate and environmental protection, the quality standards presented here should be adhered to. As a result, the quality of initial training can also be improved and, within the framework of further vocational training and further education, the topic of sustainable climate and environmental protection with reference to the world of work can be increasingly contributed to a thematic sensitization of skilled workers of all professions.

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