



# Erasmus+ - project

## Learning workshop „Sustainable environmental protection”



### Concept „Learning Workshops“

Development and implementation of learning workshops on sustainable climate and environmental protection in vocational education and training

(Heike Arold)

**Developed by the German partner**

**“nordprojekte Kaufmann & Partner”**

**Contact data:**

Heike Arold

Tel.: +49 174 190 7269

Email: [inba-sh@web.de](mailto:inba-sh@web.de)

Ralf Kaufmann

Tel.: +49 1714234764

Mail: [kaufmann@nordprojekte.de](mailto:kaufmann@nordprojekte.de)



## Content

Introduction.....	4
1. Initial position for learning workshops on sustainable climate/environmental protection.....	5
2. Objectives of a learning workshop „sustainable climate-/environmental protection“ in vocational training .....	6
3. Target groups and implementation levels and timing .....	7
4. Requirements to a learning workshop „sustainable climate-/environmental protection“	8
5. Organization and implementation of learning workshops „sustainable climate/environmental protection“ .....	10
5.1 General principles of a learning workshop.....	10
5.2 Fields of action and content .....	12
5.3 Actors and institutions to be involved .....	14
5.4 Organizational aspects of the design and implementation.....	15
6. Framework conditions .....	18
6.1 Spatial and technical equipment.....	18
6.2 Time frame for carrying out the learning workshop .....	19
6.3 Learning variants.....	20
7. Structure of the learning workshop concepts .....	21
7.1 Content overview and identification of learning content.....	21
7.2 Rough concept and detailed concept .....	22
8. Quality standards.....	24
Literature .....	28
Free Licence.....	28
Disclaimer.....	29

The following general concept for learning workshops on "Sustainable climate and environmental protection" in vocational education and training was developed under the direction of Heike Arold for the project partner Nordprojekte "Kaufmann & Partner". As a basis for the development of the concept, the results of an extensive investigation and numerous case studies at the national level of all partner countries involved in the project were used, these were discussed with the partners and the structure was determined. In addition to Nordprojekte Kaufmann & Partner should also be mentioned here:

 <p><b>BBZ</b> Rendsburg-Eckernförde</p>	<p>BBZ – Berufsbildungszentrum Rendsburg-Eckernförde</p> <p>Germany</p>
 <p><b>R.U.S.Z.</b> Reparatur- und Service-Zentrum</p>	<p>R.U.S.Z. - Verein zur Förderung der Sozialwirtschaft</p> <p>Austria</p>
 <p><b>Šolski center Nova Gorica</b></p>	<p>Šolski center Nova Gorica</p> <p>Slovenia</p>
 <p><b>36,6 CC</b> Competence Centre <small>based in Łódź, Poland</small></p>	<p>36.6 Competence Centre</p> <p>Poland</p>
 <p><b>AIFED</b> Asociación de Innovación, Formación y Empleo para el Desarrollo Sostenible</p>	<p>AIFED</p> <p>Spain</p>



## Introduction

As a comprehensive investigation on sustainable environmental protection in vocational education and training (VET) in the partner countries (Germany, Austria, Poland, Slovenia and Spain) involved in the Erasmus+ project "Learning workshop sustainable environmental protection - LWS" has shown, the topic is considered in the context of training/apprenticeship and further education considered only marginally or integrated into other topics. However, the too little consideration of sustainable environmental and climate protection in the context of VET and further education is becoming more and more important. The reason for this is that the topic is omnipresent in the world of work and thus in the professional world due to legal or company regulations with regard to work processes and procedures, work materials and techniques, energy savings, resource conservation, etc. And especially from the political side, they call for more sustainable climate and environmental protection in the world of work.

Furthermore, numerous case studies with skilled workers and experts from five selected professional fields with a focus on the topic in everyday work and with a view to VET have additionally underpinned the need to take the topic more into account in VET and further education. In the course of the case studies in the fields of industrial and technical professions, construction professions, commercial professions, health/care professions and service professions in the hotel and gastronomy sector, it was identified how strongly the topic is currently being used in VET and further education and where there is still a need for action. In addition, with regard to numerous professions in the above-mentioned vocational fields, it was identified which climate and environmental protection topics have a work-related relevance in detail. It also became clear how climate and environmental protection is or should be implemented sustainably in everyday work.

The results of both investigations carried out in all participating partner countries form the basis for the basic concept developed here for a "learning workshop on sustainable environmental protection" - whereby this was expanded to the aspect of climate protection. The general concept for learning workshops on the subject of sustainable climate and environmental protection does not refer to individual vocational fields or even professions, but includes all aspects that have been found to be relevant and that could be identified in the partner countries and that are not subject to country-specific circumstances and framework conditions. In the concept, only aspects that are universal and across vocational fields are addressed.

The development of the following concept for learning workshops represents a kind of guideline for the development of profession-specific learning workshops on the subject of sustainable climate and environmental protection as well as for such learning workshops at schools, for example. It is a basic concept that describes the overarching objectives of such learning workshops, the necessary framework conditions, and possible core content, requirements for learning workshops and specific aspects of organization and implementation as well as structure. The development also took place with the objective that the concept should be easy to understand and transferable to other EU countries that are not involved in the project. It is intended to facilitate the development of vocational field-related or profession-specific learning workshops with the above-mentioned focus. In addition, a comparability of these should be made possible by the given framework for corresponding learning workshops. The concept should not only serve as an orientation, but at its core, specific learning workshops should take into account the fundamental aspects described in order to achieve the desired objectives and effects.

## 1. Initial position for learning workshops on sustainable climate/environmental protection

The topic of "sustainable climate and environmental protection" is laid down in the climate protection goals of the EU and is named by the European Commission as one of the priority goals for the future. The EU policy aims to minimize the risks to the climate, public health and biodiversity. The European Green Deal should make Europe to the first climate-neutral continent - primarily with the help of clean energy sources and environmentally friendly technologies. The economy in particular is also affected by this – in all sectors of the economy. In addition to reducing emissions, companies are required to use environmentally friendly procedures and processes as well as clean technologies and products, to conserve resources and to raise the environmental awareness of their employees, both in the area of production and in the area of services.

In fact the topic has arrived in the economy and is already being implemented in a wide variety of ways in order to achieve the desired EU goals with a view to the future, nevertheless the investigation of the Erasmus+ project "LWS" has shown, among other things, that there is still a lot of need for action. In particular, the topic is still given too little attention in the course of training/apprenticeship and further education, regardless of individual sectors or vocational fields and professions. The investigation has shown that the topic is not primarily implemented as an independent content-related topic in the course of training/apprenticeship, but is at most integrated into the specialist content to be imparted. An analysis of existing framework curricula and curricula for numerous professions in different vocational fields makes it clear that sustainable climate and environmental protection aspects are taken into account in the course of various specialist topics, but are not considered separately as an own learning component. The topic does not get the relevance in the course of training that is desired. In particular, the investigation has shown that there are numerous work processes and professional points of contact where the topic plays a role with regard to the considered vocational fields (and the professions located there) within the framework of the project. Enough aspects could be identified so that it makes sense to teach them separately in the course of training.

And also with regard to further training, the investigation has shown that there are selective training courses and then primarily on individual special topics. However, these do not include all relevant and identified aspects of climate and environmental protection in relation to different professions. The results of the case studies made it clear that, regardless of individual professions, there is a need for appropriate training in sustainable climate and environmental protection with a focus on the everyday work, procedures and processes, even for trained skilled workers. And there is a large and growing interest in participating in such training courses.

In order to give the topic a greater consideration in the course of training/apprenticeship and further education, it should be given an own focus in the form of learning workshops. Thus, the topic with its numerous professional references can be imparted in a targeted and , practical way. Both trainees and skilled workers should should acquire the necessary know-how and skills with a focus on the respective profession (or the associated vocational field) so that they are able to implement climate and environmental protection in the context of their work. By solving tasks and trying them out in practice, a significantly greater learning effect can be achieved and a connection to the real world of work can be established than if the topic is only taught theoretically.

Finally, it should be pointed out that appropriately designed learning workshops can also be designed in such a way that they can not only be implemented in a vocational-related manner, but are also formulated in general terms and can therefore be implemented in schools, for example. In this way, the awareness of climate and environmental protection can be sustainably trained in pupils before they even start working life, or the topic can be made accessible to interested people in general. This endeavor is also illustrated by the demands expressed by the interviewed experts in the course of the case studies.

## **2. Objectives of a learning workshop „sustainable climate-/environmental protection“ in vocational training**

The following general concept for learning workshops on sustainable climate and environmental protection, especially in connection with vocational training and further education, has the objective to bring the topic more into the professional and work-related focus. The overarching objective is, in particular, to raise awareness of climate and environmental protection in the workplace and in relation to work with its profession-specific work processes and procedures.

Trainees / apprentices, but also trained skilled workers, are to be brought closer to the topic of sustainable climate and environmental protection by means of learning workshops in a profession-specific and practical manner. The main objective of the "learning workshop" tool is that, on the one hand, theoretical basic knowledge is imparted, but the majority of the know-how is to be acquired practically with reference to the real working world and individual everyday work as well as professional specifics. Trainees/apprentices or skilled workers in further training should work on the topic in a self-organized and targeted manner by means of using practical tasks in order to achieve the greatest possible learning effect. The concept of the learning workshop is intended to give them the opportunity to try things out and to implement what they have learned more easily in everyday work later. The teachers or trainers of such a corresponding learning workshop only have a leading, guiding and supporting role.

The general concept for learning workshops has also the objective to establish a framework and structure as well as basic content priorities for the design of profession-specific learning workshops. The objective is to develop a basis for profession-specific learning workshops. It can be used as a guideline for designing such. Furthermore, the objective of the general concept is to ensure that certain content-related topics and aspects are taken into account in the development of profession-specific learning workshops on the subject of sustainable climate and environmental protection and are deepened on a professional-specific basis.

With regard to training/apprenticeship, the concept makes clear that a bundling of professionally relevant topics on climate and environmental protection can be taught more intensively in a separate learning module and a greater practical relevance can be produced. Up to now, relevant topics have only been marginally considered when imparting various specialist topics. Appropriate learning workshops give the topic much greater importance. And also with regard to the further training of skilled workers from a wide variety of professional groups, a greater awareness of the topic can be achieved through thematically completed learning workshops that are tailored in terms of content to the topic of climate and environmental protection. Thus, it is possible to compensate for specific deficits in know-how and skills on the subject and to establish a practical connection to everyday work.

The following general concept aims to act as a basic concept for the development of learning workshops on sustainable climate and environmental protection at other levels such as e.g. schools or as a free educational offer for those interested in the subject and to provide input for this.



### **3. Target groups and implementation levels and timing**

Depending on the orientation and individual objectives, the target groups of learning workshops on sustainable climate and environmental protection include beside trainees (corresponding to different training professions) also skilled workers (corresponding to different professions). Pupils, participants in vocational preparation and those interested in the topic in general can also be defined as possible target groups. The respective target groups and implementation levels are very closely related and are described as follows.

#### ***School implementation level***

In order to raise young people's awareness of the topic of climate and environmental protection even before they start working life, appropriate learning workshops should already be integrated into everyday school life. The age limit, the type of school and grades only play a subordinate role, insofar as the practical tasks of a learning workshop on the subject of sustainable climate and environmental protection are formulated according to their skills and know-how. The implementation of such a learning workshop can either be an integral part of individual subjects such as natural science subjects, economics subjects or general social science subjects, or it can be carried out as part of project weeks.

#### ***Implementation level vocational preparation (measures)***

In order to bring the topic of sustainable climate and environmental protection with a focus on professional life and the working world closer to young people and young adults on the threshold of working life participants in pre-vocational training measures can be named as a further target group. In this way, they are specifically prepared for what expects them in the world of work even before they start their professional life. By means of a corresponding learning workshop, they can get a first impression of the extent to which and to what extent the topic will affect them later in their day-to-day work and job-related. Corresponding learning workshops should include practical tasks that are based on general requirements in a vocational field or profession. Work process-related tasks and profession-specific tasks with a focus on climate and environmental protection in everyday work would exceed the skills of the target group, overwhelm them and be ineffective. Furthermore, appropriate learning workshops can also contribute to the vocational orientation and the career choice process in the course of pre-vocational training measures.

#### ***Implementation level training / apprenticeship***

One of the two core target groups of learning workshops on sustainable climate and environmental protection with a focus on professional specifics such as work processes, procedures, materials, etc. include trainees of all training occupations. In particular, their climate and environmental protection awareness should be sharpened in a job-related manner. In addition to their theoretical and practical vocational training, practical tasks in learning workshops should be used to teach them where and how the topic of sustainable climate and environmental protection occurs in their everyday work and how this can be implemented in a targeted manner. The trainees should not only be sensitized to the topic, but also acquire all the necessary skills that will enable them to implement sustainable climate and environmental protection in their later professional life or, if necessary, to acquire new know-how.

The learning workshops should be implemented as an independent unit in the course of the training/apprenticeship in order to attach the necessary importance to the topic. Depending on the VET system, e.g. insofar as training takes place exclusively in schools, the learning workshop can be integrated into theory lessons or attached to practical training units.



In the course of dual training, the learning workshops can take place at vocational schools, in training companies or inter-company workshops or laboratories. The time at which learning workshops are implemented as part of training / apprenticeship depends on the assigned vocational field, the training profession itself and its content and duration. In general, however, the trainees should have gained their first professional experience in order to be able to relate the practical tasks of the learning workshop to their work.

### ***Implementation level further training***

The second core target group is skilled workers with and without previous knowledge of sustainable climate and environmental protection in relation to their profession or the corresponding vocational field. Learning workshops on sustainable climate and environmental protection should be placed here as a further training measure. In addition to the operational infrastructure, especially the work processes and procedures that are affected by the topic as well as, for example, the handling of certain tools, machines, materials and customers should be mentioned. Just as the topic of occupational safety is omnipresent - regardless of the occupation or a specific profession - and is offered as further training internally or externally by independent training providers, profession-specific topics on sustainable climate and environmental protection can and should be established as free further training offers in VET. In this way, gaps in knowledge and lack of skills can be compensated.

In order to ensure a holistic transfer of knowledge and the practical acquisition of skills related to certain professions on the subject of climate and environmental protection in relation to everyday work, the learning workshops should be implemented by certain institutions. At the level of further education, such institutions should be mentioned that have the necessary know-how about climate and environmental protection as well as knowledge of the individual professions and where and how climate and environmental protection should and can be implemented sustainably. An implementation could be carried out by professional and specialist associations, chambers, guilds, etc.

### ***Implementation level free educational offers***

In addition to the target groups mentioned above, there is another one that should be mentioned, namely those who are generally interested in the topic. For this target group, the content of the learning workshops should be broader and more general. The tasks to be worked out can be adapted to the needs of the participants or the content focus can be made more flexible and not too closely tied to individual vocational fields or professions.

## **4. Requirements to a learning workshop „sustainable climate-/environmental protection“**

A learning workshop is generally understood to be a learning method that enables the learners to work out given content on the basis of concrete tasks or objectives in the form of free work in a self-organized and practical way. In the case of a learning workshop on sustainable climate and environmental protection, the higher-ranking requirement to the learning workshop is that the participants work on different sub-topics and aspects of climate and environmental protection in general (pupils and interested parties) as well as profession- and work process-related (trainees and skilled workers) and be put in a position to use the learned things in the everyday work (related to the core target groups).



The learning workshop should be designed in such a way that the awareness of the participants is raised in such a way that they recognize where in their everyday work processes are affected and how they can make a contribution to climate and environmental protection in relation to their work and their profession.

Depending on the requirement, whether new topics are to be worked out, e.g. by using experiments, games, situations, you speak about an experience workshop or, if existing knowledge is to be deepened and expanded through practice and trying, of a production workshop (cf. H.-W . Kranert, Studierenden 2017). Correspondingly the work tasks should be formulated in an objective-oriented manner and the necessary framework conditions should be created.

In addition, there are other requirements for appropriate learning workshops, especially for trainees and skilled workers. Here are to be mentioned:

- The set work tasks and objectives should relate exclusively to topics related to sustainable climate and environmental protection with reference to the relevant vocational fields or professions that are processed in the learning workshop
- The work tasks are formulated clearly and understandably
- They should be an integral part of training/apprenticeship plans or further training
- They should follow a set objective and structure and have a fixed timeframe for implementation
- They should be equipped with the necessary personnel and the necessary infrastructure and materials

In addition to the requirements for learning workshops as such, the requirements for the specialist staff carrying out the workshop (e.g. teachers, trainers) are important for a successful implementation.

### **Requirements for the specialists carrying out the learning workshop – trainers**

- They should have the necessary technical know-how about climate and environmental protection related to the respective vocational fields or professions that are affected in the learning workshop.
- They should have knowledge of profession-related work processes and procedures and be able to relate them to sustainable climate and environmental protection aspects.
- They should have experience in designing and implementing learning workshops
- They should be aware of their role in the learning workshop (accompanying and guiding function)
- They should be able to maintain a culture of togetherness
- You should have pedagogical experience and be familiar with the "learning workshop" learning method, i.e. be able to prepare, carry out and follow up on it.
- They should be well networked with actors from the economy who they may want to involve in the learning workshop (e.g. for venues, material donations, technical know-how and support)
- They should regularly inform themselves about career changes and on the subject of climate and environmental protection aspects in the world of work and know the necessary sources for updating their know-how
- They need pedagogical skills as well as social skills such as organizational skills, conflict resolution skills, willingness to cooperate, team skills, media skills

## **5. Organization and implementation of learning workshops „sustainable climate/environmental protection“**

In the following, based on the results of the investigation carried out in the five partner countries about learning workshops in general and on the status quo of sustainable climate and environmental protection with regard to everyday work, processes and procedures in five selected vocational fields (or vocational groups) and the need of qualification on this topic, the essential principles of the learning workshops will first be briefly explained. This must always be taken into account when designing a profession-specific learning workshops, regardless of the considered vocational fields or professions.

In addition, the core fields of action and content, which each specific learning workshop on sustainable climate and environmental protection should include, are briefly presented as well as possible actors to be involved who can be important and supportive for the implementation. Finally, organizational aspects that need to be considered for a smooth implementation of the learning workshops should be briefly presented.

### **5.1 General principles of a learning workshop**

In order to implement the learning workshops on sustainable climate and environmental protection successfully and to make them comparable in terms of their framework conditions and to achieve a good quality, the learning workshops are based on general principles. This must be taken into account in the individual design of learning workshops, particularly those that are vocational field-specific or profession-specific.

#### **Individualization:**

The various complex sub-topics and aspects as well as work tasks that are worked out in the course of a learning workshop are intended to relate to the topic of sustainable climate and environmental protection, but can be designed individually due to professional specifics. The work tasks should be adapted to the individual skills and abilities as well as the know-how of the individual participants. In this way, the status quo of existing know-how, the need for specific know-how and their deficits should be individually taken into account.

#### **Flexibility:**

The learning environment of the vocational field- or profession-specific learning workshops should be designed in such a way that they can be used flexibly for working on different sub-topics on sustainable climate and environmental protection on the one hand and on the other hand be used both in the course of training/apprenticeship and in the form of further education offers.

#### **Combination:**

The focal points and tasks of the individual learning workshops are closely based on the respective everyday work and the real work processes and procedures in which climate and environmental protection come into play. They contribute to the acquisition of practical skills and realistic professional experience with a focus on climate and environmental protection. Therefore, the learning workshops should be closely linked to the existing training plans in the course of training/apprenticeship or, in the case of skilled workers, to the reality of work.



### **Inclusion:**

Within the framework of the learning workshops, every participant should be accepted and treated equally, regardless of their gender, age or origin, religion, education and any disabilities or other individual characteristics. Every participant should be treated with the same respect and be given the right to participate. In each case, the means and methods that are required in the learning workshop should be used so that the individual participant can successfully take part in the learning workshop.

### **Self-determination and self-organization:**

The participants should work out the work tasks in a self-determined and self-organized manner, sharpen their climate and environmental awareness and their skills for self-organization and self-organized learning should be promoted.

### **Transparency:**

The learning workshops and their objectives and structure are transparent and designed comprehensible for everyone.

### **Transfer:**

The participants should be able to transfer the acquired know-how or acquired skills about climate and environmental protection to their everyday work and to use it there in a targeted manner.

### **Cooperation:**

In order to make the practical relevance as realistic as possible, the learning workshops should involve institutions that are related to the topic of climate and environmental protection and/or that are involved in training or are related to the considered professions such as chambers, guilds, professional associations, companies.

### **Practical orientation:**

The content to be worked out in the learning workshops should be closely based on the real work requirements and give the opportunity to create a connection to everyday work through practical tasks and simulations. They are intended to provide space for practicing and trying things out and thereby raising awareness of the topic.

### **Promotion of general action skills:**

In addition to imparting know-how and practical skills and abilities in connection with sustainable climate and environmental protection in relation to the work processes and procedures of the vocational fields or professions considered, the learning workshops should also contribute to the promotion of social, methodological and personal skills, like

- Social skills: e.g. communication skills, teamwork, conflict resolution skills, organizational skills, diligence, sense of responsibility
- Methodological skills: e.g. work techniques with a focus on protecting the climate and the environment in the long term, thinking in context (especially the connection between work steps/processes and sustainable climate and environmental protection), learning ability and techniques, problem-solving ability in relation to sustainable climate and environmental protection, connected thinking



- Personal skills: e.g. willingness to learn, motivation, flexibility, reliability, self-assessment, perseverance
- Media skills: e.g. dealing with common information media and communication technologies, programs

### Promotion of professional ability to act:

The learning workshops should not only raise awareness of sustainable climate and environmental protection and sensitize the participants to the topic in their everyday work, but also concrete and vocational field-specific / profession-specific work processes and procedures in which climate and environmental protection come into play, can be practically simulated on the basis of work tasks. The know-how as well as relevant skills and abilities should be learned through practical trial and error. The professional ability to act should thus be improved.

### Pedagogical support:

Because the learning workshops include profession-specific tasks based on real work processes/procedures or on professional requirements with a focus on sustainable climate and environmental protection and the participants should work on these independently, they should primarily be accompanied pedagogically. The responsible specialists (staff) who implement the learning workshops only have an advisory and supporting function and are responsible for the introduction as well as the preparation and follow-up work.

## 5.2 Fields of action and content

As the investigation of the five partner countries on the work processes and procedures with a focus on sustainable climate and environmental protection in five selected vocational fields or vocational groups has shown, there are three main vocational field or cross-vocational fields of action in which the topic is present.

1. **The infrastructure** that describes the framework of the workplace. In relation to the learning workshops and the vocational fields or professions considered accordingly, the higher-level workplace such as a shop, a production hall, a restaurant, an office and the local environment of the workplace should be mentioned. But also the immediate workplace itself and the instruments, tools, machines, etc. used there should be included here.
2. **The organization of work** or work-organizational processes must be taken into account in the learning workshops across all vocational fields and professions and then should be broken down into vocational-specific details. This includes the type, scope and conditions of how the work – i.e. the work processes and procedures – is organized. In particular, climate and environmental protection aspects should be considered in the field of action which related to the type of work tasks, the division of tasks between employees and the design of their cooperation (i.e. work forms) as well as the resources used, working hours expended and work structures.
3. **The work processes and procedures** that have to be carried out directly in everyday work and that ultimately describe the considered vocational field - i.e. the profiles of the associated professional profiles - or individual professions. This includes all direct activities and actions that are necessary to exercise the profession, such as e.g. advisory activities, dealing with customers, operating machines, using tools and materials.



The core content of corresponding learning workshops should be closely based on the real work of the participants, so that a lasting benefit is achieved in terms of the know-how and skills that have to be acquired. Above all, the awareness of an applied climate and environmental protection in relation to work should be raised and the participants should be made aware that they can fully implement climate and environmental protection in the workplace in the long term.

With regard to climate protection, in which the focus is primarily on emissions and the earth's atmosphere, the overarching core content that should be further specified according to the considered professions should include, among other things

- Energy-saving design of the workplace as a whole
- Energy-saving design of the individual workplace
- Energy-saving implementation of work processes
- Increase in energy efficiency in the consumption of energy sources
- Resource conservation and use of regional resources
- Reduction of emissions
- Promotion of alternative energies and their professional use
- Measures to avoid the climate change

With regard to environmental protection, especially at the workplace and in everyday work, the learning workshops must take into account core content that relates even more to work as such and has a direct impact on the environment and human health. Here should be mentioned, among other things

- Reduction of electricity, gas and water consumption
- CO<sub>2</sub> reduction (e.g. in industry and trade)
- Reducing paper consumption by promoting digital techniques
- Environmentally friendly workplace design (e.g. office furniture, plants)
- Waste avoidance
- Waste sorting
- Implementation of recycling, sustainable waste management
- Use biodegradable cleaning agents
- Use of regional and environmentally friendly products and materials
- Prevent waste of materials
- Use of environmentally friendly materials (plastic avoidance)
- Use of energy and resource-saving work instruments and techniques (use of environmentally friendly innovations when using machines, tools, for example)
- Environmentally friendly logistics (transport, warehousing, procurement and shipping of goods/materials)
- Promotion of environmental awareness to the outside world (e.g. among customers, business partners, network partners)
- Introduce green marketing
- Strive for environmental certification

### **5.3 Actors and institutions to be involved**

Depending on the vocational-specific orientation and depending on the individual tasks, in addition to the pedagogical staff who organize and implement the learning workshops, different actors can and should be involved in the planning and implementation of learning workshops on sustainable climate and environmental protection (especially with reference to vocational fields or individual professions). This can and should also take place against the background that the learning workshops serve to develop the know-how practically and with a real connection to everyday work. Numerous work processes and procedures in different vocational fields and professions take place in close cooperation with other actors. This should also be taken into account in the learning workshops and reflected by them.

#### ***Skilled workers and companies***

These primarily include specialists involved in the work processes and procedures, or those who are upstream or downstream in the implementation of the learning workshops. For this reason, their know-how should be taken into account when formulating realistic work tasks and they should be integrated into group and team work with different tasks and especially when simulating work processes they can play a role.

In addition, appropriate specialists who are involved in the work processes and procedures can or should be consulted as experts for the design of the learning workshop. Therefore, also a close cooperation is recommended with companies whose employees should be trained in the learning workshop or in which the professions under consideration in the learning workshop are practiced. They can be involved in an advisory way and/or provide materials or instruments/tools up to the possibility of acting as a venue for the learning workshop.

#### ***Inter-company workshops and learning laboratories***

In addition to specialists from practice or companies, inter-company workshops or learning laboratories and workshops of different training institutions such as guilds, chambers or independent training providers can be called in to implement the learning workshops. On the one hand, these institutions have professional know-how and, on the other hand, they often have a suitable infrastructure for the implementation of the learning workshops. This means that if certain instruments, tools, materials, machines, etc. are required for the implementation, these are preferably available there and can possibly be used.

#### ***Professional and business associations***

Depending on the tasks, they can act as experts and support the design of the learning workshops. Professional associations in particular have broad know-how about professional requirements, job-specific work processes and the implementation of climate and environmental protection with regard to the professions they represent and can therefore be involved in the design and in particular the task formulation in the learning workshops in an advisory and supportive manner.

Business associations, on the other hand, have valuable contacts in business and mostly know the need for learning workshops on sustainable climate and environmental protection from the perspective of their member companies. They can be included in an advisory way insofar as the design and task formulations are to be based on real needs.



### ***Chambers and labour administration***

These two institutions can be involved in the organization and implementation of learning workshops on sustainable climate and environmental protection in an advisory and supportive way. Both institutions are involved in training and further education and know possible needs and requirements from the point of view of trainees or skilled workers in the relevant professions, for which the respective chamber is responsible or the employment administration across the professions.

### ***Free educational institutions***

Insofar as the institution carrying out the learning workshops does not have the required infrastructure to implement the tasks in the learning workshop on sustainable climate and environmental protection, a cooperation with independent training providers who can compensate for this deficit (insofar as they have the appropriate workshops, etc.) could be used for the implementation.

### ***Climate and environmental protection experts***

Insofar as teachers and trainers (pedagogical specialists who carry out the learning workshop) do not have the necessary know-how on sustainable climate and environmental protection in relation to individual vocational fields or specific professions, climate and environmental experts can be involved for support, who act directly as contact persons in the course the implementation and can intervene in a supportive manner. They can contribute to the objectives of the learning workshop being achieved. Further possible experts in the immediate vicinity of the institution carrying out the learning workshop can be identified through professional associations or chambers.

## **5.4 Organizational aspects of the design and implementation**

In order to achieve learning success, it is crucial that vocational field- or profession-specific learning workshops on sustainable climate and environmental protection are designed in such a way that they take into account the prerequisites of the participants, their status quo and their learning needs. Thus trainees generally have a lack of knowledge and generally a greater need for knowledge and hardly any practical experience with regard to climate and environmental protection in relation to their work, while skilled workers usually have previous experience and know the connections between climate and environmental protection and their work processes much better. Because of this, the content should be adapted to the respective needs, which in turn means that generally need-based work tasks should be set within the framework of the learning workshop.

Thus the content to be taken into account about the sustainable climate and environmental protection in learning workshops for trainees should be more comprehensive and relate to basic core work processes and procedures. If possible, they should be timed in such a way that the reference to certain training focal points and contents that are dealt with in the training/apprenticeships is evident.

Insofar as climate and environmental protection measures related to certain work processes come into play, corresponding content-related learning workshops should be carried out when these topics become a subject of training/apprenticeship, e.g. in vocational schools, in training workshops, in companies. Accordingly, the necessary tools and materials must also be available in order to implement the learning workshop in a practical manner.

With regard to the target group of skilled workers, in addition to general profession-related climate and environmental protection topics, demand-related or specific topics can also be the subject of the learning workshop. The tasks can be formulated much more specifically according to the needs and refer specifically to individual work processes or procedures. Because these are learning workshops for further training purposes, the timing for implementation is individual. In order to achieve the desired learning success, the status quo, the needs and the desired objectives of the respective participants should be taken into account when designing the learning workshops.

In order to implement learning workshops on sustainable climate and environmental protection in an objective- and result-oriented manner, different organizational steps must be taken into account in addition to defining the target groups depending determination of content and work tasks. Because the more precise the preparations for the learning workshops and the organization are, the better and smoother the subsequent implementation will be (cf. Verlag PROSchule 2019).

### ***Step 1: Become aware of the objectives and advantages of the learning workshop***

For the participants, regardless of the target group, a learning workshop as a teaching method offers numerous advantages and pursues certain objectives that you should be aware of in advance.

That includes

- Independent and self-organized learning
- Hands-on learning
- Consideration of the status quo regarding know-how and previous experience
- Promotion of reflection skills and self-control
- Working and learning by using different social forms such as team work, group work, individual work

In order that the participants achieve the greatest possible success, the learning workshop should be based on the above mentioned objectives. It should also encourage motivated and independent learning. The participants should be able to transfer what they have learned directly into their everyday work and apply it there successfully.

### ***Step 2: Allow and calculate time for planning***

In order to successfully implement the learning workshop, numerous considerations must be made in advance and decisions must be made, as well as organizational things have to be planned and implemented. The preparation of a learning workshop requires sufficient time and cannot only be realized on the basis of theoretical considerations.

### ***Step 3: Defining the topics and classifying them***

Before the practical design of the learning workshop begins, the topic or subject area that is to be considered in the learning workshop must be determined at first. Because the climate and environmental protection in different vocational fields or individual professions are taken into account in different ways in the specific work processes and procedures, considerations must be made in advance of the learning workshop. Here are mentioned considerations about sub-topics which can be bundled in a learning workshop and which topics can be included in own learning workshops. In general, it can be assumed that profession-specific sustainable climate and environmental protection has so much substance that several learning workshops are required to deal with the topic in its entirety.

#### ***Step 4: Status quo diagnosis about the know-how of the participants***

In order to prepare the infrastructure of the learning workshop and the necessary material as well as to formulate the concrete work tasks, it is necessary to identify the status quo of the respective group of participants in advance. For example, due to their limited professional experience, trainees have a different level of knowledge than skilled workers who take part in a learning workshop on sustainable climate and environmental protection as a further training measure. In this way, both target groups (but also other target groups such as schoolchildren and those generally interested in the topic) can be given a short written survey in advance or, if necessary, an informal test on the topic can be carried out to identify the status quo.

#### ***Step 5: Development of the work task***

When the topic has been determined and the status quo of the participants has been identified, the learning level can be determined and the work task can be developed and formulated on this basis. In addition, the form of methodological implementation must be determined in connection with the work task, namely whether the work task is to be worked out completely or in parts alone and/or in a team and/or a group.

#### ***Step 6: Choice of required materials***

In order to be able to implement the work task optimally in practice, consideration should be given in advance about the necessary materials for implementation. These should be compiled in an overview so that important things are not forgotten when procuring materials. When selecting the materials, vocational-specific knowledge (knowledge of the work processes and procedures that are closely related to climate and environmental protection and are dealt with in the learning workshop) can be an advantage. When selecting the materials, experts from the field of VET, from companies and from chambers, the labour administration or professional associations can be helpful. The amount of materials should be limited and stand in a balanced relationship to the task to be worked on. Overwhelming the participants due to too much material and a loss of overview should be avoided.

#### ***Step 7: Check and create cooperations***

In order to base the work tasks as closely as possible on the real world of work (work processes and procedures) and thus achieve the greatest possible learning effect, consideration should be given to which partners should be won for the implementation of the learning workshop, such as companies, technical schools, inter-company training sites/laboratories, chambers, business associations. It is then necessary to clarify the roles that they should have in the learning workshop and to formulate their tasks in concrete terms, e.g. what they can contribute to the procurement of material or to what extent they can participate in the design and establishment of the learning location and which operative tasks they could take on in the direct implementation. For this purpose, all stakeholders to be involved should be invited to planning meetings during the planning phase.

#### ***Step 8: Structuring of the learning location or room***

In the run-up to the implementation of the learning workshop, the learning location must be determined, i.e. where the learning workshop should take place. It is important to check whether the institution carrying out the learning workshop has an adequate room for it, in which the practical work can be carried out, or whether the training workshop can be set up locally at another institution. It is therefore important to think carefully about whether and what kind of inventory is required, such as e.g. group tables, Internet access, computers, workbenches, simulated workplaces including machines. And also the number of participants must be taken into account and the room needs to be divided up for them according to the tasks so that they can work optimally.

### **Step 9: Set Rules**

In the course of preparing the learning workshop, fixed rules should be considered that all participants must comply with. Fixed rules should be established for the use of the learning workshop, the handling of materials and tools as well as dealing with each other and with the accompanying pedagogical specialist. Thus, a careful handling of materials and tools as well as conflict-free working among each other can be ensured and a smooth process can be guaranteed overall.

### **Step 10: Detailed scheduling**

The course of the learning workshop should be planned in detail in advance. This includes, in particular, a good time planning, which should be transparent for the participants so that they can complete the task and detailed tasks within the overall time frame and achieve their learning objective. For this purpose, it is advantageous to develop a daily agenda that limits the time for individual work steps.

## **6. Framework conditions**

In order to implement a profession-specific learning workshop on sustainable climate and environmental protection, the necessary framework conditions must be created depending on the professional focus and the corresponding content which are taught. Not only the spatial conditions must be available, but in particular considerations have to be done about the technical equipment, the time frame and possible forms of teaching within the learning workshop.

### **6.1 Spatial and technical equipment**

A learning workshop generally represents an (educational) space in which the participants independently of the respective target group carry out practical tasks in a self-determined and organized manner. In order to achieve the greatest possible learning effect, vocational field-related or profession-related work tasks that are closely based on real work processes and procedures should be worked out. In addition to theoretical introduction, the focus is always on independent research, discovery and trying out. In order to realize this, the learning workshop should generally be carried out in an own room.

This should be designed in such a way that different room areas or learning stations are created such as

- area with information material and internet access for know-how and information research (i.e. computer workstations)
- area for the working materials
- areas for group and team work or individual work
- hands-on workspaces with simulated workplaces
- area for presentations

The area with information material should be designed in such a way that the information materials are freely accessible and enough computer workstations are available to give each participant the opportunity at any time to obtain the information required for the practical implementation of the task. Furthermore the working materials or a selection of materials should be freely accessible so that the participants can work independently and in a self-determined manner.

The workplaces of the participants should be visually separated from each other and still allow the opportunity for exchange, because in particular group and team work and sometimes cross-group and team work should be targeted in order to establish a connection to the real world of work. Here, too, the participants primarily work together with colleagues or cooperate with different departments.

Because the learning workshop includes a small theoretical part in addition to the practical work, in particular for the introduction and at the end the work results are to be presented, an area with presentation possibilities should be set up in the room, e.g. a large presentation table, a projector with screen, blackboard, whiteboard.

The technical equipment, on the other hand, depends on the respective work tasks and how closely they are based on real working conditions. Thus in the run-up to planning the learning workshop, it is important to consider which technology and equipment is required to carry out the work tasks, where this can be obtained and whether a work task may have to be adapted or if the learning workshop only can be carried out at direct work locations or existing inter-company training locations (which are mostly technically well equipped).

## **6.2 Time frame for carrying out the learning workshop**

The time frame for a learning workshop on sustainable climate and environmental protection in relation to vocational fields or individual professions cannot be specified in general, because the time frame depends on the imparted knowledge, the content and work tasks and also on the respective target group. Nevertheless, recommendations can be made for a rough orientation.

### ***Time scope and point of time of learning workshops for trainees***

For trainees, the relevant content should be broken down into one to a maximum of two days. Different content should be bundled into subject blocks in individual learning workshops. These should be carried out at the times during the training when the curriculum provides vocational-specific teaching content that is related to the content of the respective training workshop on sustainable climate and environmental protection. Thus, the participants can also make a direct connection to specific work processes and procedures. For example, a learning workshop on the subject of resource conservation or recycling in relation to industrial and technical training professions could be carried out when material science, procurement or disposal is the subject of the training plan. Depending on the considered profession (or vocational field) and the relevance, several learning workshops can be carried out as part of an apprenticeship, which are each thematically self-contained and/or possibly complement each other in terms of content.

### ***Time scope and point of time of learning workshops for skilled workers***

Because the target group consists of trained skilled workers with the appropriate vocational experience and the learning workshops on sustainable climate and environmental protection with regard to their respective work processes and procedures are a further training measures, the scope of time depends on the imparted knowledge / content and the individual needs of the participants group. Appropriate further training serves on the one hand to acquire new know-how and on the other hand to sensitize the skilled workers.

The participants must be released from their work for appropriate further training, so that the learning workshops should be not longer than one to a maximum of two days. If there is a need for several sub-topics on sustainable climate and environmental protection, then these should be taught in individual learning workshops in order to keep the duration of a learning workshop short..



In general, however, a learning workshop can also be comprehensive and cover all profession-specific and work-related topics, so that the time frame is respectively large and several days are needed. In this case, a clustering of the relevant topics and content is recommended. These should then be taught in individual units in the learning. Thus, once a learning workshop has been set up, it can be used for different topics, the duration of individual work tasks can be limited and the units can build on each other and carried out at different times.

### ***Time scope and point of time of learning workshops for pupils / general interested people***

Learning workshops on sustainable climate and environmental protection for schoolchildren and those generally interested in the subject can be carried out at schools in the course of project days, but also in the context of lessons, and can be offered for the interested ones freely and independently by educational institutions. The time frame is to be determined depending on the individual topics.

## **6.3 Learning variants**

Because a learning workshop is a learning method with which the learners acquire knowledge independently, particularly through the practical work out of work tasks, it is important when planning learning workshops to consider how the work tasks should be worked out. Depending on the objective, work task and specified time frame as well as the number of participants, there are three variants in particular.

### **1. Individual work**

This means that each participant works alone and works independently on the assigned work tasks. The variant is particularly useful when a work task is not too complex, pursues a simply formulated objective or central content should be worked out which exclusively touch the work processes the participant who is working on it. It requires a high degree of initiative, willingness to learn and the ability to work and learn in a self-organized manner. Here the participants have the opportunity to work out the work tasks at their own pace and learning style and take personal responsibility for the result. The pedagogical staff who carries out the learning workshop has a stronger advisory and supporting function here (cf. TU Darmstadt, 2023).

### **2. Team work (especially partner work)**

This means that two or maybe more people work closely together on a common task and everyone contributes his/her special skills to the team in order to achieve the objective. Here, the responsibility for the achieved result lies equally to all team members. The variant is ideal for more complex tasks that aim not only to impart technical know-how, but also to promote social skills such as organizational skills, communication skills, considerateness, sense of responsibility, etc. The pedagogical staff who carries out the learning workshop has an advisory and only partially supportive function and takes on the role of an observer.

### **3. Group work**

This means that several participants work together in a group and work together on a work task and they have the same interest. In contrast to teamwork, in the group each member takes on individual responsibility for subtasks and everyone pursues an own objective. Within the group, each member works independently on the subtasks of an overall task which are assigned to him. The variant is particularly useful for complex work



tasks that combine different subtasks and allow a clear division of work. The group work is then made up of different individual work and promotes the ability to cooperate, but also individual work and leads to greater efficiency. The pedagogical staff who carries out the learning workshop has an advisory and, to a certain extent, guiding function and takes on more the role of an observer (cf. Asana Forward, 2023).

In addition, to save time, the theoretical introduction to the learning workshop can and should be carried out by face-to-face teaching or presentations for all participants. This also applies to the presentation of the work results at the end of a learning workshop. Any suitable form of presentation such as PowerPoint presentation, whiteboard presentation, lecture, demonstration, video, audio technology, etc. can be used for this.

## 7. Structure of the learning workshop concepts

The concept for a learning workshop on sustainable climate and environmental protection in vocational fields or for different professions should follow a logical structure. Beside a description of

- the need for action,
- the general or detailed objectives,
- the intended target group,
- the requirements for the people or institutions involved (target group, teacher, provider of the measure),
- the general conditions and framework (learning environment, materials, learning methods/forms)

in particular, the following planning elements should be presented such as

- an overview of possible learning topics (including a suggestion for tasks),
- rough concept,
- detailed concept.

These are described in more detail below.

### 7.1 Content overview and identification of learning content

The content overview should clearly show the content to be imparted and, if possible, describe the individual work steps and requirements for the individual content. This is done against the background that the involved teaching staff not only know the core content as such, but also the subordinate aspects that need to be imparted in detail and also the possible requirements that should be taken into account.

The overview of contents, insofar as the learning workshop covers several topics, should follow a logical order and be reflected in the rough concept and the detailed concept (the daily agenda). This can be done most practically by numbering the learning content (A to D etc. and subtopics in A1, A2, B1 etc.), which is reflected in the rough and detailed concept.

The learning content should generally be orientate very closely to the reality of work and should be selected in such a way that it can be worked out in a practical and self-organized manner. It should be clear to the participants that the content to be worked on will have an impact in their daily work and that they can therefore benefit from the learning workshop for their work. And so the motivation to learn will be increased and learning success will be ensured. In order to identify possible learning content for professional-specific sustainable climate and environmental protection - insofar as this is not known - this can be determined

in the context of expert discussions (i.e. with skilled workers who practice the relevant professions). The following seven key questions can be used for this purpose:

1. What is the meaning of sustainable climate and environmental protection in your profession or vocational field?
2. How is sustainable climate and environmental protection regulated with regard to your profession (regulations and laws)?
3. In which work areas does sustainable climate and environmental protection take place?
4. Where does sustainable climate and environmental protection take place in relation to individual work processes and procedures and how is it implemented? In terms of handling materials, machines, working with others?
5. Where and how does sustainable climate and environmental protection take place in relation to your place of work (e.g. production hall, laboratory, workshop, construction site) and your individual workplace (e.g. office, workbench, sales room)?
6. Where do you see the greatest need for qualification on sustainable climate and environmental protection in your vocational field or profession?

## 7.2 Rough concept and detailed concept

The **rough concept** is intended to provide the teachers who implement the learning workshop a quick overview of all learning content and tasks, their time allocation in the learning workshop, the respective task-related learning objective, possible learning forms and materials as well as measures for monitoring the respective learning success. If it is a one-day learning workshop with less content a description of the above mentioned points is enough. However, if the learning workshop includes several different core contents and several days (regardless of whether these are completed consecutively or at different times), a tabular overview (see example) of the relevant aspects is useful. So the essential aspects can be recorded at a glance. A corresponding rough concept can be also used for the implementation control and target control by a target/actual performance comparison of what is to be implemented each day.

**Overview table rough concept - example from the field of nursing professions**

	Day 1	Day 2	Day 3	Etc.
<b>Core topic / main emphasis</b>	<b>A - materials in nursing (e.g. bandages)</b>	B -	C + D	
<b>Learning content / subtopics (A – D see also list of learning content)</b>	A 1. Use of recyclable materials A 2. Use more environmentally friendly materials A 3. Material procurement A 4. Planning economical use of materials A 5. Material disposal	B 1 B 2 B 3 etc.		
<b>Learning objectives</b>	Description of learning objectives for topics 1 to 5			
<b>Work tasks</b>	Short form of work tasks for topics 1 to 5			
<b>Time frame</b>	Per task in minutes and total in hours			
<b>Possible forms of learning</b>	<ul style="list-style-type: none"> <li>➤ Teams of two</li> <li>➤ Group work</li> <li>➤ Individual work etc.</li> </ul>			
<b>Work materials to be provided</b>	List of all required work materials, to be able to implement the assigned tasks , i.e. choice of materials from everyday work, possible literature			
<b>Equipment of the learning workshop</b>	For example <ul style="list-style-type: none"> <li>➤ Tables, chairs and their arrangement</li> <li>➤ Shelves, blackboard, whiteboard, beamer</li> <li>➤ PCs and Internet access, WLAN</li> <li>➤ Possible software</li> <li>➤ Simulated workplace with everyday equipment etc.</li> </ul>			
<b>Form of success control</b>	e.g. test, presentation of results, evaluation questionnaire etc.			

The **detailed concept**, in turn, is a concrete schedule for the respective days in the learning workshop. It contains concrete and detailed agendas (daily plan) that divide the days of the learning workshop into work units and in which it is determined when which task should take place in which order and how much time is set for working out the details. In addition, there are also times for the theoretical instructions and result preparation and presentation etc. as well as start and end times and break times.

They serve both the teachers and the participants for time orientation with regard to the fulfillment of the work tasks. This prevents the participants are losing time by working put a task and come to no conclusion and results. In addition, the reality of work can also be reflected very well by means of time specifications, because here also the work tasks are mostly to be completed in certain times.

## 8. Quality standards

Vocational field or profession-specific learning workshops on sustainable climate and environmental protection should be structured and designed, irrespective of the considered vocational field or professions, in such a way that they have a specified level of quality. Appropriate concepts for these learning workshops should therefore take into account established standards in order to ensure the desired quality and to make the learning workshops comparable as a teaching method across institutions and/or countries. While the content and tasks are specific to a vocational field or to professions and the learning workshops must be equipped with different materials and the time frame for the implementation of the work tasks varies, some general quality standards can still be defined. Insofar as changes take place in the future in the field of vocational education and training, the quality standards can be supplemented.

It will be distinguished between input quality standards, which describe the framework conditions, process quality standards, which relate to the implementation, and output quality standards, which define the objectives and learning successes.

### Input – Quality standards

No.	<b>Quality criterion</b> and its description
1	<b>Number of participants</b> The number of participants per learning workshop should be limited depending on the work tasks, the prerequisites (previous professional knowledge and experiences) as well as the equipment and the selected learning variant (individual, group, team work) to an appropriate number (min. 6 to max. 16)
2	<b>Participant diversity</b> The learning workshop should be accessible to everyone in relation to its intended target group (e.g. trainees, skilled workers, schoolchildren, interested people), regardless of gender, physical limitations, age, origin or religion
3	<b>Take previous vocational knowledge and experiences into account by the work tasks</b> When creating the learning workshop or the work tasks, previous professional knowledge and experience should be taken into account, especially with a focus on sustainable climate and environmental protection in relation to the professions that are considered
4	<b>Participation requirements</b> Participants from the target groups of trainees, schoolchildren and people who are generally interested in sustainable climate and environmental protection do not need any special prior knowledge Participants from the target group of skilled workers should know the core work processes of their profession and the need to acquire profession-specific knowledge on sustainable climate and environmental protection



5	<p><b>Qualification of the staff carrying out the learning workshop (teachers)</b></p> <p>Teachers carrying out the learning workshop must have relevant knowledge of the affected vocational fields or professions, i.e. core work processes and procedures and the implementation of climate and environmental protection measures in everyday work</p> <p>They must have pedagogical experience as well as skills such as organizational skills, communication skills, conflict resolution skills and creativity</p> <p>The teaching staff are to be selected by the institution, which carries out the learning workshop and by a special selection and allocation process based on specific criteria</p>
6	<p><b>Location of the learning workshop</b></p> <p>The location for carrying out the learning workshop must be chosen so that it is easily accessible for the respective target groups (participants). If necessary, accessibility must be guaranteed by suitable measures</p>
7	<p><b>Time frame of the learning workshop</b></p> <p>The time frame should be based on the target group and the objectives and especially on the content/work tasks and should not exceed 2 days for each topic</p> <p>If several topics, which scope covers several days, are targeted in the learning workshop, they should be divided into individual topic-related learning workshops (each 1 to 2 days)</p>
8	<p><b>Equipment of the learning workshop</b></p> <p>The equipment should be provided according to the individual content and work tasks (e.g. literature, materials, tools, work clothes) and be based on the reality of work</p> <p>The furniture (shelves, chairs, tables, PC workstations, blackboard, etc.) and the room layout should be chosen according to the chosen learning variant (e.g. group work, individual work)</p> <p>Simulated workplaces should correspond to real workplaces</p>
9	<p><b>Cooperations and networks</b></p> <p>Cooperation and networks with actors from professional practice such as companies, professional associations, chambers, etc. should exist or be developed and maintained in the long term in order to identify the need for training and to formulate corresponding realistic work tasks and, if necessary, to receive specialist support</p>
10	<p><b>Transparent process</b></p> <p>Both the teachers carrying out the learning workshop and the participants should be familiar with the content, the time frame, the objectives and the rules at the beginning of the learning workshop</p>

## Process – Quality standards

No.	<b>Quality criterion</b> and its description
1	<b>Objective setting and transparency</b> A clear objective should be formulated for the learning workshop, against which the success can be measured at the end and which is made transparent for all participants
2	<b>Core teaching content</b> The core teaching content of the learning workshop should only include vocational field-related or profession-related content with a focus on sustainable climate and environmental protection  The core teaching content should be closely related to the participants' everyday work  The core teaching content should be adaptable at any time and take into account the individual needs of the participants
3	<b>Work tasks</b> The work tasks should be formulated in a way that is easy to understand, should be based on the participants' day-to-day work and allow room for independent implementation and solution, i.e. they should allow for different solutions
4	<b>Form and methods of work</b> The form of work (e.g. group, team, individual work) should be determined according to the task at the beginning of the learning workshop and explained to the participants  The working methods for the implementation of the work tasks should be freely selectable by the participants against the background of independent learning
5	<b>Theoretical and practical part</b> The proportion of theoretical knowledge transfer should be limited to the instruction in the learning workshop and a few technical basics that are required to implement the work tasks  At least 80% of the learning workshop should be designed for practical work  The practical part should have an obvious reference to real work processes and procedures and be presented clearly and enable precise results
6	<b>Preparation activities</b> The structure, the procedure and all the necessary framework conditions of the learning workshop as well as the core content and the objectives should be clearly defined in the preparation and communicated to the participants. And the time required for the preparatory activities should be appropriate.
7	<b>Follow-up activities</b> The learning workshop should generally include follow-up activities to present results, identify deficits and check the objective achievement





8	<b>Monitoring and support</b> For all activities of the participants, pedagogical monitoring and support should be provided, which only intervenes if there are ambiguities and open questions
9	<b>Communication and information gathering</b> The possibilities, channels and types of communication (e.g. feedback) and information gathering , should be clear to the participants
10	<b>Performance criteria</b> At the beginning of the learning workshop, performance criteria should be formulated and made transparent, by which success can be measured at the end

### Output - Quality standards

No.	<b>Quality criterion</b> and its description
1	<b>Knowledge about and implementation of sustainable climate and environmental protection</b> The participants should acquire knowledge about measures and activities on sustainable climate and environmental protection in relation to their profession or the vocational field in which they work, and work on this in practice
2	<b>Awareness of sustainable climate and environmental protection</b> The participants should develop an awareness of sustainable climate and environmental protection in relation to the working world in general and their work, i.e. work processes and procedures, handling materials and tools, etc.
3	<b>Soft Skills</b> The participants should improve soft skills such as creativity, teamwork, communication skills, organizational skills, independence, media skills (depending on the work task, more can be added)
4	<b>Course of the learning workshop</b> The course of the learning workshop should be clearly defined and communicated to the participants
5	<b>Objective and success review</b> Appropriate methods should be used to review sub-objectives and overall objectives The review of sub-objectives should take place against the background of possible adaptations and supporting activities by the teachers
6	<b>Evaluation</b> In order to check the achievement of objectives and to optimize the learning workshop, it should be evaluated at the end by those involved in it

## Literature

Kranert H.-W., Studierende (2017): Lernwerkstatt im Förderschwerpunkt emotionale und soziale Entwicklung, (Hrsg.) Fakultät für Humanwissenschaften – Institut für Sonderpädagogik an der Julius-Maximilians-Universität Würzburg

Wenzel S., Wedekind H., Parson D., Knoke A., Kaske S., Gabriel E. (2011): Audit für gemeinsame Lernwerkstätten von Kitas und Grundschulen, (Hrsg.) Deutsche Kinder- und Jugendstiftung

Verlag PROSchule (2019): Organisieren Sie eine Lernwerkstatt für Ihre inklusive Klasse, <https://www.schulleiter.de/schulorganisation/organisieren-einer-lernwerkstatt/> (Zugriff 09.01.2023), (Hrsg.) VNR Verlag für die Deutsche Wirtschaft

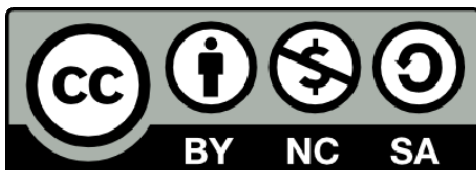
Asana Forward (2023): Gruppe vs..Team: Was ist der Unterschied?, <https://asana.com/de/resources/group-vs-team> (Zugriff 28.02.2023)

TU Darmstadt (2023); Einzel, Partner- oder Gruppenarbeit . Wann ist welche Sozialform effektiv?, HDA, Themensammlung, (HRsg.) TU Darmstadt, [https://www.einfachlehren.tu-darmstadt.de/themensammlung/details\\_10624.de.jsp](https://www.einfachlehren.tu-darmstadt.de/themensammlung/details_10624.de.jsp) (Zugriff 28.02.2023)

## Free Licence

The product developed here as part of the Erasmus+ project "Learning workshop – sustainable environmental protection" was developed with the support of the European Commission and reflects exclusively the opinion of the author. The European Commission is not responsible for the content of the documents

**The publication obtains the Creative Commons Licence CC BY- NC SA.**



This licence allows you to distribute, remix, improve and build on the work, but only non-commercially. When using the work as well as extracts from this must

1. be mentioned the source and a link to the license must be given and possible changes have to be mentioned. The copyrights remain with the authors of the documents.
2. the work may not be used for commercial purposes.
3. If you recompose, convert, or build upon the work, your contributions must be published under the same license as the original.



## Disclaimer

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.