Conceptual and didactical core to implement the SDGs in SMEs through apprenticeship programmes.

Project Result 2 | July 2022

sustainable apprentices

Sustainable Apprentices

Training the workforce of the future to apply the SDGs in SMEs through Work-Based Learning in Apprenticeship programmes

www.sustainableapprentices.eu

This document is part of the Project Result 2

Sustainable Apprentices Online Open Learning Materials Platform

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Introduction

The Conceptual and Didactical Core (CDC) consists of a document analysing and describing the most relevant cutting-edge **theoretical fundamentals and pedagogical approaches** to support VET educators and in-company trainers in setting up apprenticeship programmes that create new Work-Based Learning opportunities. These opportunities aim to foster the implementation of the Sustainable Development Goals (SDGs) in small and medium-sized enterprises (SMEs) using digital tools and project-based learning. The goal is to provide vocational education students with knowledge on sustainable practices and skills that are highly demanded and needed by SMEs.

The **theoretical fundamentals** refer to the rules, principles, or theories on which non-conventional teaching-learning methods and resources are based. These methods and resources aim to produce specific cognitive, socio-emotional, and behavioural learning outcomes that will enable the working force of the future to deal with the challenges of each SDG in their working environments and personal lives, and therefore, support their achievement by 2030.

The **pedagogical approaches** are methods and resources that Vocational Education and Training (VET) educators and in-company trainers can apply to address the lack of motivation and interest of learners in standard pedagogical methodologies that fail to engage them. For example, project-based learning can be used to develop cross-cutting sustainability competencies in VET students. This way, they become familiar with the SDGs through gamification and can choose their preferred sustainable area to develop a project applied to their field of work.

The present **Conceptual and Didactical Core** is one of the three main elements to be included in the Sustainable Apprentices Online Open Learning Materials Platform (**Project Result 2**). The target users of the CDC are VET educators and in-company trainers who lead the implementation of SDGs in SMEs by their VET students.

To elaborate the **Conceptual and Didactical Core**, the six partners of this consortium from Ireland, Italy, Portugal, Spain, and Turkey identified the most relevant and innovative theoretical fundamentals and pedagogical approaches to implement the SDGs in SMEs through apprenticeship programmes based on work-based learning methodologies and gamification.

This document is structured by units, six in total, the same as those defined in the curriculum (PR1). Each of the units has three sections, namely:

- **Introducing the conceptual and didactical core of the unit**: Brief introduction to the objective of the unit, the meaning of the methodology or approach within the context of the Sustainable Apprentices project and within the curriculum to implement the SDGs in SMEs through the apprenticeship programmes.
- **Theoretical fundamental and the pedagogical approach**: This main section addresses the main relevant elements of the unit, provides definitions of key concepts, as well as an overview of the

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benefits of the methodology and the main problems that its implementation in the educational context may entail. The theoretical fundamental and pedagogical approach provides insight into the applicability of the methodology and/or approach in VET centres, in apprenticeship programmes, and in SMEs.

- **Recommendations to VET educators and in-company trainers**: Key points to be taken into account by the intended users of this document.

UNIT	TITLE	TOPIC
Unit 1	Sustainability and green practices in SMEs	Sustainability
Unit 2	Fostering the implementation of SDGs in SMEs through strategic planning	Strategic planning
Unit 3	Gamification to introduce the SDGs to the young workforce	SDG/SME
Unit 4	Good practices of work-based learning in SMEs	SDG/SME
Unit 5	Successfully managing apprenticeship programmes	Apprenticeship
Unit 6	Effective training for implementing sustainable practices	Training

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Learning Unit 1. Sustainability and green practices in SMEs (including considerations in young workforce training)

INTRODUCTION TO THE CONCEPTUAL AND DIDACTICAL CORE OF UNIT 1

Sustainability and green practices play a crucial role in the Sustainable Apprentices project, and it could be argued that the project's primary objective is based on these concepts. Therefore, we believe it would be beneficial to include a basic definition of these concepts in the Conceptual and Didactical Core. After briefly introducing the concepts of sustainability and green practices, basic approaches on how to apply them in SMEs, SDGs and apprenticeship programmes will be presented. It is important to give readers an understanding of the methodology used in preparing the content. We believe that an essential topic like sustainability should be presented to the readers in a certain manner. In the final section, recommendations will be provided on how to teach the concepts of sustainability and green practices to learners. We will offer tips to enhance the effectiveness of the teaching process and recommend practical applications that can be used by VET teachers and in-company trainers.

THEORETICAL FUNDAMENTAL AND THE PEDAGOGICAL APPROACH

The learning units provided by this project, will be prepared with reference to this core and aims to explain the subject of sustainability and green practices to apprentices, as well as show how they can be transformed into knowledge, skills, and competencies and how these gains can be applied in SMEs. Thus, the number of resilient SMEs with a focus on sustainability, which consider the concerns of their stakeholders while being environmentally sensitive, will increase. Such SMEs, which have the chance to increase their profitability, will find the motivation to continue these practices and take more solid steps within the framework of Agenda 2030.

The unit targets VET providers and in-company trainers, while learners at all levels of vocational education will also benefit. In the b-learning units, motivational content will be considered along with theoretical information. In this way, the professional satisfaction of VET providers and in-company trainers who deliver the training to the learners will be increased, and apprentices, who will be evaluated as the workforce of the future, will understand how the information they have learned can be applied in various areas.

One of the main objectives is to increase the quality of apprenticeship programs and training providers. It is also planned that apprentices who have achieved gains will encourage their colleagues to use sustainability practices and guide them to collaborate with different stakeholders to implement them. The contents will also support SME personnel to gain a general understanding of the Sustainable Development Goals in business and form a basis for gains in the next units.

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In-company trainers are an important tool for implementing these contents in SMEs. Employees, managers, and experts who increase their skills through in-company training will help the company's short and long-term strategic planning by analysing sectoral, regional, and national practices in the fields of sustainability and green practice.

While developing the contents, an innovative substance will be designed that guides the training and consultancy activities of VET providers and in-company trainers to accelerate the implementation of SDGs in SMEs. According to research, the integration of SDGs into SMEs is still in its infancy in most countries, so it is essential for SMEs to raise their awareness of sustainability goals and make use of opportunities in their field. The content will be created to address these specific needs, as well as identifying and incorporating existing best-case scenarios and good practices identified by local experts.

The concept of sustainability involves meeting our needs without jeopardising future generations' ability to meet their own. We require social and economic resources in addition to natural resources. Sustainability is more than just being environmentally conscious. Most definitions of sustainability include considerations for social equity and economic development.

Green practices refer to designing structures and employing processes that are environmentally responsible and resource-efficient throughout the lifecycle of a development, including buildings, from site selection to design, construction, operation, maintenance, renovation, and deconstruction. Green building practices supplement and expand on the traditional building design concerns of economy, utility, durability, and comfort.

While the units are being prepared, the definition of sustainability and green practices in every aspect, as well as how they will be applied in SMEs, will be provided to users through different theoretical and applied training, self-study, and evaluation steps.

RECOMMENDATIONS FOR VET EDUCATORS AND IN-COMPANY TRAINERS

To put it briefly, the issue of sustainability and green practices is important for SME employees and apprentices who want to introduce sustainability issues, as well as SME managers who want to prepare a strategy on this subject. It will also form the basis for activities in this field. Therefore, it is important to ensure that learners have a good understanding of the subject and to lay the groundwork for further learning.

Some tips and tricks can be given on this subject:

- Ensure that learners understand what they will learn, why they will learn it, and how it will be evaluated. Do not let them get lost in the content.

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- Describe the procedures and expectations so that learners can be more willing to work on a topic and understand what is expected of them.
- Encourage collaboration among learners. Most training content is designed to allow interaction, and the learning outcomes are arranged accordingly. However, do not let them be isolated. Increase their motivation with different group activities and suggested activities.
- Allow learners to express themselves freely. This will allow them to gain insight from each other and themselves and provide a basis for the emergence of innovative ideas.
- Relate topics to everyday contexts. Provide examples from current news or companies' sustainability activities when necessary and talk about projects carried out on this subject. Help learners realize how seriously the issue is taken by SMEs, NGOs, government bodies and society.

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Learning Unit 2. Fostering the implementation of SDGs in SMEs through strategic planning

INTRODUCTION TO THE CONCEPTUAL AND DIDACTICAL CORE OF UNIT 2

Having a plan means having a well-defined idea of where you want to go, what path you intend to take to get there, and the steps you consider necessary to achieve it. It also means reflecting on the possible obstacles that may arise and how to overcome them in order to move forward.

For a company, whether large or small and medium-sized enterprise (SME), such planning is vital. As 2030 approaches, the role of SMEs in achieving the Sustainable Development Goals (SDGs) is increasingly important, as they represent most businesses and can really make a difference. Therefore, they need to align their practices with the 2030 Agenda by creating or adapting their strategies and including sustainability matters in their planning.

This unit aims to support VET educators and in-company trainers to acquire the relevant knowledge and skills to foster the implementation of SDGs in SMEs through the introduction, development, implementation, and evaluation of a strategic sustainable action plan (SSAP).

THEORETICAL FUNDAMENTAL AND THE PEDAGOGICAL APPROACH

What is Strategic Planning?

Strategic planning provides an organisation with direction. It is a process of defining and prioritising objectives and targets so that its vision can be fully realised. These goals must be translated into a strategic plan, which will be shared and followed by employees, partners, investors, and other stakeholders. It enables organisations to become more aware of opportunities, challenges, and risks, and allows the workforce and stakeholders to work more efficiently.

The global commitment to the SDGs is largely driven by SMEs. By updating, adapting, and setting new goals and priorities in their strategic plans to include sustainability concerns, SMEs have a key role in the success of the SDGs. It is essential for each SME to assess its starting point regarding sustainability issues and its sustainable learning needs. After this analysis, designing a training course tailored to those needs is possible.

Strategic Sustainable Action Plan (SSAP)

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A sustainable action plan is designed to detail how sustainability objectives will be achieved over time, aiming to integrate Environmental, Social and Governance (ESG) and sustainability throughout an organisation. To complement the sustainable action plan, organisations often release annual sustainability reports detailing progress towards these goals. Both illustrate how sustainability is considered by a wide range of stakeholders who are increasingly interested in the sustainability performance of organisations and the positive impact they can make.

Developing a sustainable action plan is therefore a useful tool for SMEs to achieve sustainable targets and be seen as an example of good practice, differentiating themselves from their competitors. A strategic sustainable action plan (SSAP) puts sustainability at the heart of a company's strategic planning and allows it to enhance the implementation of the SDGs. This allows SMEs not only to create a positive impact, appreciated by society and stakeholders, but also to achieve greater profitability and respond to several of the challenges posed by the 17 SDGs, such as energy, inclusion, decent work, etc.

Designing these sustainability strategies and action plans can be challenging for SMEs, so this unit aims to support VET educators and in-company trainers (according to the VET field and curriculum) to assist SMEs in designing them and guide them in the definition of business plans that prompt sustainable development, depending on the SMEs' priorities, possibilities, and field.

Sustainable Business Models

Sustainable business models are those that create value for all stakeholders without depleting the resources that helped to create them. This model prioritises sustainability, considers all stakeholders, assesses and addresses environmental impacts, and produces transparent and accurate reports. There are models that may foster new sustainability-oriented strategies. One of the most widespread reference models is the circular business model. This is a huge opportunity for SMEs to ensure efficient management of natural resources, prevent environmental degradation, and encourage socially responsible behaviour.

PDCA Cycle Model

The plan-do-check-act cycle is a four-step model used to deliver change. As a cycle, it has no end and must be repeated for continuous improvement. To design such a plan, SMEs should start from "plan" - recognising an opportunity and planning a change; "do" - testing the change and carrying out small changes; "check" - analysing the results and reviewing the test, identifying what was learnt; "act" - acting based on the achieved results, using a different plan or incorporating what was learnt into wider changes to begin the cycle again. This is a useful project planning tool for SMEs which want to implement and monitor their SSAP. Through its four steps, SMEs can test the changes they want to initiate regarding sustainability and the achievement of SDGs. The PDCA cycle model will allow SMEs to follow this path with the support of VET educators and in-company trainers.

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After completing this learning unit, the adult educator is expected to have knowledge and understanding of what strategic planning is, as well as practical models that can be used to implement it, and how these can be applied by SMEs to align their practices with the SDGs and the 2030 Agenda. To achieve this, the facilitator should introduce the relevant concepts and models, presenting practical case studies. Using the problem-based learning methodology, VET educators and in-company trainers can present various challenges to young learners, such as drafting, testing, and evaluating an SSAP and a PDCA cycle model for implementing SDGs in a hypothetical or real SME.

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Learning Unit 3. Gamification to introduce the SDGs to the young workforce

INTRODUCTION TO THE CONCEPTUAL AND DIDACTICAL CORE OF UNIT 3

Sustainable Apprentices aims, among other things, to educate future generations of workers with a sustainable mindset that contributes to a new way of doing business and a greener, more inclusive economy. To this end, the project has developed a series of methodologies and didactic content to engage VET students through project-based learning, developing cross-cutting sustainability competencies, getting familiar with the SDGs through gamification, and enabling them to choose their preferred sustainable domain to develop a project applied to their field of work. This will produce specific cognitive, socio-emotional, and behavioural learning outcomes that will enable this workforce of the future to deal with the challenges of each SDG in their working environments and personal lives, and therefore support their achievement by 2030.

The didactic and conceptual core of this unit defines gamification as a didactic methodology, its pedagogical applications, and its application in internship programmes. It then explores how gamification can be used in the specific context of SMEs and internship programmes to implement the SDGs, giving examples and explaining the benefits of introducing this innovative methodology to facilitate the assimilation of sustainable concepts and their implementation in a real working environment. It also highlights the drawbacks that should be taken into account when using gamification in this specific context.

THEORETICAL FUNDAMENTAL AND THE PEDAGOGICAL APPROACH

What is Gamification?

Gamification is the use of game design elements and mechanics in non-game contexts, such as education, to increase motivation and engagement. As an educational methodology, gamification applies game elements to educational activities, such as learning objectives, assessments, and feedback, to make them more enjoyable and engaging for learners.

Gamification can be applied to a wide range of educational contexts, including classroom-based learning, online learning, and professional development. It can also be used to enhance various learning outcomes, such as knowledge retention, skill development, and behaviour change.

In the context of adult education, it involves using game design elements, such as points, leader boards, and rewards, to engage and motivate adult learners. This approach is based on the idea that people are more likely to engage in activities that they perceive as being fun and engaging.

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By incorporating these elements into educational activities, gamification can increase learner motivation, engagement, and enjoyment, which can lead to improved learning outcomes. Overall, gamification as an educational methodology has gained popularity in recent years as a way to make learning more fun and engaging for learners of all ages and backgrounds.

Pedagogical Approaches for VET Education Providers

Relevant pedagogical approaches include:

- Using gamified scenarios to teach important concepts and skills related to the subject matter.
- Incorporating feedback and goal-setting mechanisms to help learners track their progress and stay motivated.
- Creating a sense of social accountability by allowing learners to compete or collaborate with one another.
- Using game-based assessments to evaluate learners' understanding and progress.
- Incorporating real-world challenges and projects to give learners a sense of purpose and relevance.
- Providing opportunities for learners to reflect on their learning experience and transfer the acquired knowledge to their workplace or daily lives.
- Tailoring the game design elements to the specific needs and characteristics of adult learners, such as providing autonomy and choice and acknowledging prior knowledge and experience.

It is important to consider the cultural context, learners' characteristics, and the learning objectives of the gamification approach to ensure that it is well-suited to the specific educational context.

Gamification in Apprenticeship Programmes

In vocational education and apprenticeship programmes, gamification can be used to create an immersive and interactive learning experience that can help to increase retention of information and promote the transfer of knowledge to real-world contexts.

It is important to align the gamification elements with the overall goals and methods of the apprenticeship programme and have transparent communication with the apprentices about the goals and methods of gamification.

The underlying principles and methods used to design and implement educational games and activities in adult education and VET programmes include:

1. **Clear and measurable learning objectives:** The goals and outcomes of the educational game or activity should be clearly defined and aligned with the learning objectives of the course or programme.

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2. **Active and collaborative learning:** Gamification often utilises active and collaborative learning strategies, such as problem-solving, teamwork, and peer-to-peer learning.
3. **Feedback and assessment:** Educational games and activities should provide regular feedback and opportunities for assessment to help learners track their progress and identify areas for improvement.
4. **Scaffolding and progression:** Gamification activities should be designed to gradually increase in complexity and challenge as learners progress through the course or programme.
5. **Engagement and motivation:** Gamification strategies are designed to increase engagement and motivation among learners by making the learning experience more interactive, enjoyable, and rewarding.

How to work on the SDGs in VET and Apprenticeship Programmes through Gamification?

The use of gamification in the context of introducing the Sustainable Development Goals (SDGs) in apprenticeship programmes involves using game design elements, such as points, leader boards, and rewards, to engage and motivate learners. This approach will make apprentices more likely to put sustainability principles into practice in their workplaces (and their lives) through activities that they perceive as fun and engaging while internalising the 17 SDGs in a dynamic, proactive, and practical rather than merely theoretical way.

Some examples include:

- Using gamified scenarios that align with the SDGs to teach important concepts and skills related to sustainability.
- Incorporating feedback and goal-setting mechanisms to help learners track their progress and stay motivated.
- Creating a sense of social accountability by allowing learners to compete or collaborate with one another.
- Using game-based assessments to evaluate learners' understanding and progress.
- Incorporating real-world challenges and projects that align with the SDGs to give learners a sense of purpose and relevance.

As already mentioned above, it is crucial to consider the cultural context and learners' characteristics, as well as ensuring transparent communication about the goals and methods of the gamification of the apprenticeship programme.

Applying Gamification to implement SDGs in SMEs

Gamification can be a useful tool for implementing the Sustainable Development Goals (SDGs) in small and medium-sized enterprises (SMEs) by increasing employee and apprentice engagement and motivation towards achieving sustainable business practices. Gamification can make the process of sustainability more

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enjoyable and engaging for employees, leading to increased commitment to sustainability goals and greater success in achieving them.

Here are some specific ways in which gamification can be applied to implement the SDGs in SMEs:

- **Increase awareness and knowledge:** Gamification can be used to educate employees about the SDGs and the importance of sustainability in business. Through interactive games and activities, employees can learn about the goals and how their individual actions can contribute to achieving them.
- **Encourage sustainable behaviour:** Gamification can incentivise sustainable behaviour by rewarding employees for taking sustainable actions. For example, employees could earn points or badges for reducing waste, conserving energy, or using sustainable materials.
- **Foster collaboration:** Gamification can encourage collaboration and teamwork towards achieving sustainability goals. Employees can work together on challenges or competitions to achieve sustainability targets and earn rewards.
- **Measure progress:** Gamification can be used to track and measure progress towards achieving sustainability goals, providing employees with real-time feedback on their performance and motivating them to improve.

Overall, gamification can be a useful tool for SMEs to implement the SDGs by increasing employee and apprentice engagement and motivation towards sustainability goals. By making sustainability more fun and engaging, gamification can lead to greater success in achieving sustainable business practices.

Cons of using Gamification to be taken into account

While gamification has many potential benefits for vocational education and apprenticeship programmes, there are also some potential problems or cons that should be considered. These include:

- **Overemphasising rewards:** When using gamification, it's important to avoid overemphasising rewards to the point where learners become more focused on the rewards than the learning itself. This can lead to a "gaming the system" mentality, where learners focus solely on earning points or badges instead of engaging with the material.
- **Lack of personalisation:** Gamification elements may not be effective for all learners, and some learners may feel that they don't fit in with the game-based environment. In addition, some learners may require personalised feedback or instruction that is difficult to provide through gamification.
- **Potential for distraction:** While gamification can be engaging, it can also be distracting, particularly if learners become too focused on the game elements rather than the learning content. This can result in reduced attention and retention of the material.
- **Implementation challenges:** Implementing gamification in vocational education and apprenticeship programmes can be challenging, particularly if there is limited technological

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infrastructure or training for teachers and trainers. It can also be difficult to create effective and engaging game-based activities that align with learning objectives and outcomes.

While gamification has potential benefits for VET education and apprenticeship programmes, it's important to carefully consider the potential drawbacks and implement gamification in a thoughtful and intentional way.

RECOMMENDATIONS FOR VET EDUCATORS AND IN-COMPANY TRAINERS

1. Gamification can be an effective way to engage and motivate apprentices towards achieving sustainability goals in SMEs. By making sustainability more fun and engaging, gamification can increase apprentices' commitment to sustainable practices and improve their understanding of the SDGs.

2. When designing gamified learning activities, it's important to align them with the learning objectives and outcomes of the apprenticeship programme. Gamification should not be seen as a replacement for traditional learning methods, but rather as a complementary approach to enhance the learning experience.

3. Gamification activities should be designed to reflect real-world scenarios that apprentices will encounter in their future careers. This will help them to develop practical skills and knowledge that they can apply in the workplace.

4. In-company trainers and VET educators should work collaboratively to design and implement gamified learning activities that are tailored to the needs of the SME and the apprentices. This may involve consulting with the SME to identify specific sustainability goals and challenges, and designing gamified activities that address these issues.

5. Evaluation and feedback are essential for measuring the effectiveness of gamification activities and identifying areas for improvement. In-company trainers and VET educators should collect data on the performance of apprentices in gamified activities and use this feedback to refine and improve the activities over time.

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Learning Unit 4. Good practices of work-based learning in SMEs

INTRODUCTION TO THE CONCEPTUAL AND DIDACTICAL CORE OF UNIT 4

To fulfil the practical dimension and value of the SDGs in the training of young workers in SMEs, including good practices, it is crucial that trainers and tutors can plan and develop training actions with a dual objective:

- Acquiring appropriate professional competencies aligned with the SDGs.
- Acquiring teaching skills that guarantee the success of the teaching-learning process.

When in-company training is provided by internal staff, the success of this training requires not only people with knowledge and experience in the area in which the training is provided but also people with the skills and didactic resources to achieve the desired objectives.

This unit will focus on training apprentices to be able to convey the importance and value of the SDGs to new recruits. The trainers to be trained in this curriculum (the trainees) will learn about:

- Applying communication, motivation, and attention-grabbing techniques in the teaching-learning process.
- Using different teaching methods, techniques, and media.
- Preventing and controlling stage fright.

Learning will always be done from a practical approach so that they can help apprentices understand the importance of incorporating sustainable practices into their work. Throughout this unit, practical exercises and recommendations will be provided to serve as a source of inspiration.

THEORETICAL FUNDAMENTAL AND THE PEDAGOGICAL APPROACH

We will work didactically, with "Active Pedagogy" criteria, to achieve a high level of understanding, development of skills and a change of attitudes in the participants.

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Active pedagogy is a teaching model where education centres around the students to make them active participants in their learning. The aim is for them to learn through observation and practice, and to apply their knowledge consciously. This learning model is based on planning: programming and formulating objectives. Programming is a crucial action as it involves arranging a whole system of activities in an operational way, with a view to achieving the objectives. On the other hand, formulating objectives is essential to describe the results in terms of behaviour that we want students (in this case, apprentices) to acquire.

The next step is to specify the pedagogical bases that will help us to achieve a change in, or acquisition of, new behaviours by future workers in companies regarding the SDGs. We need to know the pedagogical methods to be used: verbal or participatory. Participatory methods are more learner-centred, with learner-trainers actively involved. Examples of such teaching methods are small groups, case studies, role-plays, brainstorming, demonstrations, and self-assessment exercises, etc.

It is also important to pay attention to the didactic means and resources (classroom distribution, blackboards, materials, etc.), as well as to the types of personalities among students (active, reflective, theoretical, and practical).

The final objective for trainers is to design a course with the techniques and tools studied throughout the training in this unit. To achieve this, it is necessary that the trainers who are beneficiaries of this curriculum acquire a set of teaching skills that guarantee the success of the teaching-learning process. Through this learning, they will acquire the basic knowledge that will enable them to effectively programme, deliver and evaluate training actions for apprentices (their students).

In order to achieve the goals set by the SDGs in companies, internal trainers are key, as they will be the transmitters of knowledge, culture and actions on Sustainable Development Goals in the company. The training is aimed at all people who develop, or intend to develop, their professional activity in the field of non-regulated training, either within companies to provide internal training to workers, or in centres or entities that provide vocational training for employment, aimed at apprentices, workers, unemployed workers, and special groups.

Among the benefits of this training unit, the following aspects can be highlighted:

- To learn about the techniques and tools that mentors can use to convey the importance of acquiring an SDG culture in companies.

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- Promote the SDGs in organizations through new recruits who can serve as references for the rest of the workforce.
- Serve as a source of inspiration for other organizations/companies.
- To achieve a social, environmental, and economic impact that contributes to a planet and economic model that promotes quality employment and where money is only a means to achieve social and environmental ends.

This Sustainable Development Goals Training of Trainers training programme can be implemented for both in-company trainers and VET trainers. This training is the perfect programme for trainees to learn the techniques and tools they can use to convey the importance of acquiring an SDG culture in companies to new recruits and apprentices.

It is very important that mentors communicate to new employees the importance of integrating the SDGs into the daily management of their work, and that in this way, it becomes engraved in the DNA of the company. They will be the future of the organization and have a younger perspective, already familiar with this culture based on sustainability.

RECOMMENDATIONS FOR VET EDUCATORS AND IN-COMPANY TRAINERS

In conclusion, an active learning approach based on active methodology makes a lot of sense in the field of sustainable apprenticeships as it will contribute to designing participatory and motivating training actions that can help drive the SDGs in the company through new recruits and apprentices.

Sustainable apprentices will learn about the techniques, methods, and teaching resources that they can use in internal training, in which they will be the main agents in the transmission of knowledge on SDGs, and actively promote a culture based on sustainability.

Sustainable trainees will acquire the basic knowledge and skills that will enable them to plan and deliver training actions in which they will be involved as trainers, integrating examples and good practices that can serve as a source of inspiration to promote new actions.

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Learning Unit 5. Successfully managing apprenticeship programmes

INTRODUCTION TO THE CONCEPTUAL AND DIDACTICAL CORE OF UNIT 5

In all the main European countries, apprenticeships have three fundamental characteristics:

1. Firstly, the acquisition of necessary skills for a profession occurs through "transfer of professional knowledge" from an experienced worker to a young apprentice.

2. Secondly, skill acquisition takes place through a combination of learning modalities and environments, alternating between training provided outside the company (such as schools and professional institutes) and training provided within the company (alternating between on-the-job and off-the-job training).

3. Finally, apprenticeships are structured as real employment contracts. This implies that the apprentice receives a salary and receives training tailored to the needs of the company. At the end of an articulated multi-year training course, the company will have a highly skilled and compatible apprentice who will be of interest to hire.

THEORETICAL FUNDAMENTAL AND THE PEDAGOGICAL APPROACH

Effective Communication Skills and Methods

One of the most critical issues is how to use effective communication methods. In addition to an accurate technical-professional preparation, normally held by those who perform this role, managers and tutors must possess communication skills that become the fundamental prerogative for creating a good interaction. They must always be ready to receive signals transmitted, sometimes confusedly, by new recruits, interpret behaviours and reactions, and help the young person to become aware of what is happening to them, enabling them to reflect, understand and speak. The ability to "active listening" is essential to encourage the new employee to open up and stimulate them on their journey of discovery and self-knowledge; it offers the possibility to observe in-depth the reactions and behaviour of the young person and constitutes an effective mode of emotional support.

Applicability in VET and Apprenticeship Programmes

To plan a course from the beginning, the trainer must highlight the importance of interaction, dialogue and learning together, also in order to make the future tutor/manager aware of the methods and tools to be

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used to be a good trainer in turn. The training itself is therefore no longer an obligation to be fulfilled by law, but it becomes a practical tool, which can be spent in everyday life, contributing to the solution of issues related to everyday working life.

For their real applicability, the working process, methodology and proposed tools must be adapted to the working practices of individual companies and to the different regional contexts.

Applicability in SMEs

The design is not always entrusted to the tutor/manager; the suggested work track, to be concretely realised, must necessarily be calibrated according to the size, organisation, and regulatory constraints of the company in which they work. Some of the keywords are:

- **Know the regulatory context** related to apprenticeship paths.
- **Understand the functions** specific to the role and the elements of sectoral and / or company contracts concerning training.
- **Manage the reception** of apprentices facilitating their insertion in the company context.
- **Managing relations** with the external subjects to the company involved in the apprentice's training path, in order to favour a positive integration between extra-company training and work experience carried out in the company.
- **Plan and accompany the learning** and socialising pathways, facilitating the acquisition of the skills required by the exercise of the work activity and facilitating the learning process of the apprentice during the entire training process.
- **Evaluate the learning and skills acquired**, as well as the progress and results achieved by the apprentice during the process.

Evaluate the learning and skills acquired, as well as the progress and results achieved by the apprentice during the process.

The Role Of Tutor/Manager In Successfully Managing Apprenticeship Programmes

Apprenticeship is a tool that aims to support the training of young people entering a company. The training aims to develop the apprentice's skills so that they become increasingly autonomous in effectively performing their professional role. However, training involves costs for both the company and the apprentice. For the company, it is a matter of devoting time and resources to help the apprentice acquire the necessary knowledge and skills. The young worker must commit themselves to learning and putting new things into practice, which often requires a significant effort, attention, and application. The company and the apprentice will only really engage in training if they expect to have **advantages** that they consider superior to the costs and effort required.

The tutor is called upon to plan and support the learning and socialisation pathways and to facilitate the process of acquiring the apprentice's skills during the entire training process. To prepare an effective training path, starting from the professional role that the apprentice will have to cover and from the

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individual training plan prepared by the company, it is necessary to establish what the apprentice must learn, the activities they must perform and what skills they must possess at the end of their apprenticeship period.

At the same time, it is equally important to understand the apprentice's initial knowledge and skills, as well as some personal characteristics (expectations, interests, motivations, attitudes, etc.) that can influence their learning process. Comparing the skills required by the role with those initially possessed by the young apprentice will allow us to define a detailed plan for the training path within the company. Once the learning objectives have been established, the necessary activities must be planned so that the apprentice can acquire the required knowledge and skills. A work plan must be established that specifies:

General Rules and Ethical Obligations

An article written by Joao Santos (European Commission) provides a brief overview of how the European Alliance for Apprenticeships (EAfA) fits into the European Union's strategy for current and future employment policies. All EU member states have included apprenticeships in their "Youth Guarantee Implementation Plans". The three main types of apprenticeships are:

- Professionalising apprenticeship
- Apprenticeship for qualification and professional diploma
- High training and research apprenticeship

RECOMMENDATIONS FOR VET EDUCATORS AND IN-COMPANY TRAINERS

In conclusion, we can say that to effectively organise and manage apprenticeship programmes, it is necessary to possess or acquire certain skills, such as those described above:

1. **Understand the regulatory context** related to apprenticeship paths.
2. **Understand the specific functions** of the role and the elements of sectoral and/or company contracts concerning training.
3. **Manage the reception of apprentices** and facilitate their integration into the company context.
4. **Manage relations with external parties** involved in the apprentice's training path to promote a positive integration between extra-company training and work experience.
5. **Plan and facilitate learning and socialisation pathways**, enabling the acquisition of skills required for the job and the apprentice's learning process throughout the training period.
6. **Evaluate the learning and skills acquired**, as well as the progress and results achieved by the apprentice during the process.

Additionally, it is important to sensitise apprentices to:

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- Sustainable Development Goals
- Corporate Social Responsibility (CSR)
- ICT skills.

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Learning Unit 6. Effective training for implementing sustainable practices

INTRODUCTION TO THE CONCEPTUAL AND DIDACTICAL CORE OF UNIT 6

In Sustainable Apprentices, learning takes place in the workplace as part of professional apprenticeship training. It is a hands-on approach that helps apprentices understand and implement sustainable practices. We propose applying work- and project-based learning methods to promote the learning experience.

The conceptual and didactic core of this unit will provide insight into the benefits of work- and project-based learning in general. Furthermore, the benefits of this approach to sustainable practices will be highlighted.

Finally, the concluding section of this core will provide practical recommendations for following through with the provided activities or planning and organizing an apprenticeship training where sustainability plays a central role.

Please note that despite referring to the "work- and project-based learning" method, the didactic references will primarily elaborate on "Project-Based Learning" (PBL). This is because learning in the context of Sustainable Apprenticeship is already situated in the workplace, and most of the literature in this field refers to PBL.

THEORETICAL FUNDAMENTAL AND THE PEDAGOGICAL APPROACH

What is PBL?

By definition, Project-Based Learning (PBL) is a teaching method in which learners improve their knowledge and skills by working for a dedicated period of time on an authentic, engaging and complex question, problem or challenge, which should be as realistic as possible. PBL embeds theory and makes it come alive.

Real-Life Learning

This means that the questions, problems and challenges described in a PBL are situated in the real world. The projects can be either hypothetical or real. This way, the participants are challenged to analyse, understand and actively engage in situations as in everyday work life.

In case the projects are hypothetical or fictitious simulations, they should still be as "real-world"-like as possible. When the projects are not completely real, the advantage for the learners is that they will not be held accountable for potential failure. When the project is part of real (work) life, there is more risk involved. This can be motivating for the learners but can also become stressful. That's why it is recommendable to have safety procedures in place in case potential mistakes may have undesired or irreversible consequences.

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What the Participants Get Out of PBL

This approach helps learners develop a more profound understanding of the content than just taking up theoretical knowledge. When a complex project is the centre of the learning experience, they must actively practice their critical thinking skills, collaboration, creativity and communication skills. The fact that PBL is embedded in real life and encourages participants to practically apply and possibly extend their theoretical knowledge usually results in a more creative and satisfying learning experience for learners.

What is the Difference Between PBL and "Doing a Project"?

Projects are done in many different contexts. A work project usually takes place within a defined professional framework. It has a clear beginning and end. The aim is to complete the project within a certain timeframe. Simple learning projects are usually referred to as a bundle of tasks to support the learning experience. Their purpose is to add a practical dimension to a topic.

Project-Based Learning, however, puts the learning through the project at the centre of everything. The project contains and frames the curriculum and the instruction. Learners must think critically, apply problem-solving, collaborate, and communicate in a team. It is much more than just remembering information.

PBL with Apprentices

In fact, in a certain way, an apprenticeship is a role model of work-based learning. Per definition, apprenticeships combine practical learning with the acquisition of knowledge. However, the application of Project-Based Learning as an explicit method still makes a lot of sense in this setting. It is good to centre certain topics within apprenticeships around specific learning projects to improve their knowledge, skills and authority in particular areas. Focusing these projects on the topic of sustainability is a big opportunity.

PBL - A Perfect Opportunity to Make Apprentices Familiar with Sustainability Practices

Before drawing attention to the opportunities, please be aware of the importance of the perception of the topic by the beneficiaries. The words "sustainable" and "sustainability" are likely to become buzzwords when not enough attention is being paid to establishing a positive relationship with this topic. This is especially important in this training context when working with apprentices. Trainers and mentors must be aware of the emotional charge regarding this topic. There might be critical opinions or resistance arising if efforts in this area are not taken seriously.

Most likely, there are plenty of opportunities for defining projects regarding measures of sustainability within companies. Entrusting apprentices with this topic has several benefits: As they are the young workforce, it is likely that they will impact the company in the long run and help to engrain it in their "company-DNA". Another aspect may be that they have a "fresher" and "younger" perspective of certain structures

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In conclusion, the Project-Based Learning (PBL) approach makes a lot of sense in the realm of sustainable apprenticeships and is a real opportunity for all parties involved. Not only do the participants benefit from this approach because they have a motivating hands-on learning experience, but there is also a lot of potential gain for companies to introduce sustainable practices through this young workforce.

Trainers and mentors must pay attention to situating and facilitating the learning experience well. Here are some final recommendations on what to consider when designing PBL:

- **Choose a challenging situation, problem, or question** – Do not make it too easy or too difficult. Challenging the participants is necessary to increase their motivation.
- **Make it authentic** – Make it as real as possible.
- **Allow for learners' voice and choice** – Participants should feel in control.
- **Provide time and space for reflection** – Learners need to reflect on their experience.
- **Offer critique and revision** – Provide feedback to learners and review what was done.
- **Share positive results** – Let others know about successful projects and what participants could take away from them.
- **Avoid constant stress and overload** – Projects are stressful at times. It is good to experience for a certain time but do NOT overload the learners or put them under too much pressure.