O4 DESIGN AND IMPLEMENTATION OF REACTI-VET UPSKILLING TRAINING

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INTRODUCTION

OBJECTIVES OF THE UPSKILLING COURSE

This guide is a teacher's compendium to the *Reacti-VET Student's Upskilling Course*. It includes practical information on how to make contact and involve external stakeholders (such as local organizations, industries or SMEs), identify skill mismatches and training needs, design the structure of the upskilling course for students, develop training content, and – finally – deliver and assess the course.

This **activity has several objectives**:

- *To enable teachers who have attended the online Reacti-VET Upskilling Training for Teachers to put in practice their new competences and test them in their nomal teaching environment;*
- *To foster the introduction of networking practices between schools (teachers), SMEs and other local job providers and actors in the job market;*
- *To provide students with new skills that are needed – and explicitly requested – from the local job market and to put them in contact with possible employers.*

SHORT OVERVIEW OF THE PROCESS

The Reacti-VET **Upskilling Course for Students foresees 5 phases** that can be completed in a time frame of 3 to 5 months, broken down into 1-3 months for Phases 1, 2, 3 and 4 and about 2 months for Phase 5, the delivery of the course and its final assessment:

1. ***Establishing contact with companies****: each teacher should research and choose at least 5 SMEs or other local organizations to involve in the course, and engage in direct contact with at least 3 of them. At the end of this phase, teachers should have obtained at least:*

    a. ***questionnaires, interviews or surveys*** *on missing skills in the job market filled in by 3 companies;*
    b. ***company agreement signed by at least 1 company****, as a proof of its commitment to participate to the Upskilling Course for Students by defining a project task for students, delivering a few hours of online or face-to-face workshops and assessing the final presentations of the students.*

2. ***Pre-assessing students' skills****: based on the skills and knowledge needed by the company, teachers must assess their students' previous knowledge in the selected field using an anonymous self-assessment test submitted AFTER the company has defined the project task for the students and BEFORE the design of the course.*

3. ***Design of the Upskilling Course for Students:*** *Teachers are free to build the Upskilling Course according to normal practice, as long as they respect the following division: 10 hrs. of modules integrated into the usual lessons; 15 hrs. of extra lessons; 5 hrs. to use for activities of their choice (our suggestion: use them to create opportunities for interaction between companies and students); 1 hr. final assessment.*

4. ***Development of the content****: based on the results of the pre-assessment of students' skills, teachers must create the content for the module/s of their course using the Reacti-VET Upskilling Training for Teachers as a guide.* ***60%*** *of the learning content should ideally be* ***Open Educational Resources*** *(OERs) found online, while* ***40%*** *must be* ***newly developed contents*** *in collaboration with students and companies.*

5. ***Delivery and Final assessment****: this phase foresees the use of 3 tools, aiming at assessing the progress made by the students from all points of view: the students', with the* ***Self-assessment Test*** *(the same used for the pre-assessment of students' skills), the teachers' with the* ***Skills Evaluation Test*** *and the companies', with the* ***Final Presentations****.*

PHASE 1 - ESTABLISHING CONTACT WITH COMPANIES

REASONS TO INVOLVE COMPANIES IN YOUR UPSKILLING COURSE

The aim of the Reacti-VET Upskilling Course for Students is to provide upskilling training, aligned with the current requirements of the job market, reflecting the needs of local businesses (organizations, industries and SMEs). This feature makes it vital **to involve local companies in all the phases of the upskilling course**: from its preparation and design to its delivery and final assessment.

PRELIMINARY RESEARCH OF LOCAL COMPANIES

What will you do in this phase?
You will decide which type of company is better to involve in your course (defining the criteria)

The development of a targeted upskilling course requires some preliminary work. Careful preparation makes both the results and the management of the course easier and more effective. If this preliminary work is not well structured, or it is poor, the risk of not reaching the final goal and not accomplishing the fixed objectives rises exponentially. In addition to this, it may translate into a much greater burden of work for the management of the course, as unexpected situations may be more likely to occur, affecting the implementation of course activities.

When a course is developed in cooperation with companies, the **first necessary step is the right choice of which companies to involve**. To do so, you must know the local context and industrial area, as well as the main features of your planned course. Among the latter, you should consider:

- *the sector of the course (e.g. ICT, Administration, Tourism, Marketing..);*
- *your subject of expertise (for which you wish to develop your course).*

Remember that you should address only those business needs that are COHERENT WITH YOUR TEACHING SUBJECT because you don't want to find yourself teaching topics you have never heard of!

When you have defined the features above, you can start the research of one or more partner companies. Keep in mind that, with the aim of obtaining the best results, **companies should respect some requirements**. We suggest you find companies that are:

- ***local**: a company which is physically close to your institution will better match with your needs, school facilities, teaching methods and will make networking activities easier (e.g. one of your students' parents may work for the company or have friends or relatives in that company);*

- ***virtuous****: your upskilling course will be based on input provided by the selected companies, so these should have proven experience and expertise and be well established. A company without experience may have difficulties in identifying specific needs and may not have time or interest in supporting the training activity;*
- ***"familiar"****: as first step, it is much easier to involve companies that you personally know (e.g. a company where a friend or relative works or has worked in the past). When you gain more experience in participatory course planning, you may then start searching and approaching other companies as well;*
- ***active in the specific sector and subject****: when searching for a company, do not waste time with those that work in a sector that is completely different from your teaching subject, even if they are appealing or if they fulfil all other criteria. You need the company to have expertise in your specific subject, or it will not have the right competences to support you;*
- ***eco-friendly****: respect our planet and choose a "green" company!*

Based on your needs and preferences, integrate these criteria with your personal ones.

Now it is time to start looking for companies. You will have **different options**, such as:

- ***using your contacts and your colleagues' contacts*** *(and students as well! Each of them may know someone who knows someone…): this is the simplest way. Usually, when you personally know someone working in a company, they will more likely be open to dialogue and willing to establish a cooperation agreement (this doesn't mean that a company that you don't have contacts with will never accept to cooperate with you! It will just require a little more effort at the beginning).*

- ***contacting local chambers of commerce****: even if it may seem difficult, this strategy will provide you with a long list of local companies active in your sector of expertise. You may also decide to use specific services, such as online registers of companies (some information are usually provided for free, some require a subscription) or you can contact your local chamber of commerce and ask them for some advice. Watch out: do not forget your goal and be careful not to get lost in this sea of information!*

- ***via trade organizations****: it is similar to the previous strategy, but it has the advantage of circumscribing research into a specific sector.*

- ***research on the web and social media*** *(mainly LinkedIn): even if it may seem unprofessional, actually it is a fast and easy way to identify companies. On LinkedIn, make sure to browse the JOBS sections, it can be helpful to check out the companies in your area that are searching for interns or that have published several job offers, as they may be interested in collaborating on the design of an upskilling course.*

You can also decide to use more than one strategy together, e.g. researching on the web, and then collecting more details using company registers.

When you have identified a group of interesting companies, you should select those which seem to be closer to your needs and prepare a sorted list that can help you decide who to contact first.

Preliminary research of companies – Example

AB School (Tallinn) needs to find a company for the development of a course in the marketing sector. They want to focus on digital marketing.

Tony (teacher of the course of Inbound Marketing in AB School) starts searching on the web "marketing agencies Tallinn". As Tony finds many results, he decides to modify the research in "digital marketing agencies Tallinn". This way, he finds lists of companies active in the sector.

A first pre-selection is based on their websites, where Tony finds more information on their expertise. In fact, he is trying to identify a company which can provide a real added value to his course.

Then, Tony checks the pre-selected companies on the online company registration portal. This helps Tony sort out a list of possible partners.

Finally, Tony asks around to see if any of his friends, relatives or colleagues have a direct contact with an employee or manager of this company, because that would be an easy way to start collaborating. Otherwise, he will contact the Human Resources office or the Public Relations Officer of the company directly via mail or phone!

In short, for the preliminary research of local companies you have to:

- *define the main features of your planned course;*
- *identify the type company that responds to your needs;*
- *search for companies in your territory;*
- *prepare a sorted list of interesting companies.*

DEVELOPING TOOLS TO IDENTIFY SKILL MISMATCHES

What will you do in this phase?
You will develop a questionnaire, survey or interview and you will submit it to at least 5 local companies with the aim to identify skill mismatches.

Establishing contacts with companies is necessary to collect important information for the development of the upskilling course for your students. What you need to define is: which data to research and collect and which tool to use for the collection.

Based on the particular course subject, you will need to investigate:

- *possible skill gaps that the company often detects when hiring new employees or when dealing with interns;*
- *new professional needs that are not yet satisfied by existing staff;*
- *newly developed (or even just planned) departments within the company;*
- *difficulties experienced by Human Resources and top management with the current staff.*

To investigate these aspects, you can choose between physical or online tools. Physical tools have the advantage of facilitating a mutual exchange and the creation of human connections. These tools include face-to-face interviews, focus groups, visits to the company. On the other hand, some situations make it inconvenient or impossible to use these tools (e.g. the lockdown deriving from the Covid-19 biological emergency has prevented physical meetings in many countries for several months). In these cases, it is useful to use online tools and resources.

We suggest you create online questionnaires or surveys.

Here is a short description of some of the above-mentioned tools:

- ***Interviews****: Although interpersonal dialogue is considered a qualitative method in data collection that is quite difficult to summarize and explicit with numbers, it can definitely help you get a picture of the feelings and motivations of the respondent, way beyond the simple yes or no answers. In this case, you will only need to contact 5 companies, so it may be worth defining a short interview line-up to submit face to face or by phone to company representatives (especially HR or PR officers).*
- ***Focus groups****: a tool through which a group of people is brought together and asked to express their opinions. While interviews always involve an individual, the members of a focus groups members might interact and influence each other during the discussion.*
- ***Surveys and questionnaires****: a questionnaire survey is a quantitative research method, a standard data collection method that enables a unique formal questionnaire opportunity to be used by the researcher using appropriate, relevant methods. It is less personal than the interview method, so it may be easier to find companies willing to answer a survey (pros) but at the same time it is a missed opportunity through which to start an interpersonal relation with the company's representatives (cons).*

⇨ Please **refer to Reacti-VET Upskilling Course for Teachers, Module 1, Unit 2 and Unit 3** for the choice and use of data collection tools.
For example, you may use Google Forms, an app included in the Google Office Suite. It allows collaboration and sharing, and surveys and quizzes can be enriched with several media. It is possible

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to invite collaborators or to get a shareable link, and the answers are collected in real time in a datasheet which is created by default and stored in Google Drive.

Here is a template that you can use as an example when creating your own questionnaire for local companies:

TEMPLATE - QUESTIONNAIRE FOR COMPANIES

COMPANY'S DETAILS

- *Name and Surname of the company's representative:*
- *Name of the company:*
- *E-mail:*

EMPLOYMENT NEEDS

- *Does your company have any plans for new hiring or replacement of staff (turn-over, retirement, etc? (Y/N)*
- *If you answered "YES", how many people do you plan to hire? (number)*
- *In which areas of the company? (select answer between the following: Production / Design / Sale / Administration / Human Resources / Management / Other, please specify…….)*

JOB PROFILE

- *If your company has identified the job profiles - role, skills, duties - for which you intend to recruit, would you like to share them in the logic of building training courses that are increasingly closer to real needs? (Yes, I will send our job profiles to ..@.. / No)*
- *If you have answered "NO", which of the profiles described below is more consistent with your professional needs? (List school's training courses)*

REQUESTED SKILLS

- *What skills do you often find lacking in new employees or interns? Please list them (open-ended question)*
- *Is there an area / department of your company that is undergoing continuous changes and that would need staff with updated skills and knowledge? (Y/N)*
- *If you answered "YES", please specify what area or department and what kind of skills or knowledge. (open-ended question)*

In short, for the development of tools to identify skill mismatches you will have to:

- *define the main point of interest to investigate with companies;*
- *choose a tool to use;*
- *collect information.*

DEVELOPING DIRECT CONTACT WITH COMPANIES

What will you do in this phase?
You will develop direct contacts with at least 3 local companies that agree to collaborate to the design, delivery and assessment of the Upskilling Course for Students.

Even for those of you with no experience of SMEs, establishing a contact with companies is not difficult, as it only requires being informed and some common sense. However, you might find some of these tips useful to get started:

1. ***Select with attention the best person to approach****. Especially if you find contact details online, you should check to have the right reference. If possible, avoid general emails (e.g. info@..) and look for HR (Human Resources) or PR (Public Relations) Officers. They have a greater awareness of the company's needs regarding new staff and of skill gaps (furthermore, it could be an occasion to place your students at the company for an internship!).*

2. ***Prepare a standard communication but remember to personalize it!*** *Some information is generic (info on your school, on the project…), but other parts have to be tailored on the chosen company. Do not simply refer to the sector of production, you should express your interest in that specific company: you do not want ANY company working in that area, you want THEM!*

3. ***Offer a bargaining chip****. You could find companies interested in participating because they want to contribute to the training of local students or help to improve the preparation of future professionals. Many companies will only collaborate if they see some benefit in doing so. It doesn't mean you have to pay them for their cooperation, obviously, but try to be persuasive about the direct benefits for the company. For example, proposing further cooperation and the creation of a partnership (you can propose to send your students for internships at their company or offer upskilling courses for their employees).*

4. ***Be aware of your possibilities****. Offering more than what you can really give is counterproductive. Check your possibilities with your school's management before starting any negotiation.*

5. ***Decide who will be the school contact for each company****: many different people managing the same partnership may create troubles (coordination is not always easy, and the company representatives may feel confused if approached by different people from your school). If your school wishes to create a stable collaboration with certain companies, it could be useful to identify the staff members who will be dedicated to this.*

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6. ***The human element matters**. Plan to use both written communications (such as emails), to be more formal and have a trace of your arrangements, and calls and visits to companies, to let them hear your voice and meet you personally.*

7. ***Keep continuous contacts**. It requires some time to create a connection with a company, but it may be quite fast to lose what you have gained so far. When you start a contact, you have to take care of it. You should avoid contacting a company only when you absolutely need it, but at the same time, avoid invasive communications.*

The case study below may be a source of inspiration when planning collaboration schemes between your institute and local companies.

Case Study – Fondazione JobsAcademy (JAC, Italy)

Fondazione JobsAcademy (JAC) is a short-cycle Higher Education Institution located in San Paolo d'Argon (Bergamo, Italy), set up to train skilled technicians in strategic areas for the Region's economic development and competitiveness. Its courses are highly specialized in technology, in connection with the local production industry. It is accessible to all those who completed a high school cycle (EQF 4). Its 2-year courses provide a technical level EQF 5 qualification.

How do companies and JAC keep contact typically?
JAC has some dedicated staff for managing contacts with companies. The main contact modalities are calls, visits to companies (also with students), students' internships, business seminars in JAC, events for companies in JAC.

Do companies take part in JAC's process of defining teaching contents?
The teaching contents are agreed between JAC and the entrepreneurs: JAC provides guidelines on the necessary contents (as required by Italian Ministry of Education and/or JAC's strategy) and the professionals develop the actual content. JAC has given a systematic character to the analysis of the professional needs of the companies that usually collaborate in the conception of courses and in the courses design phase, in the organization of internships and workshops and in the work placement of the graduates. Since February 2019, an online questionnaire has been prepared and used by companies to document their needs (e.g. Forecasting new hiring or replacement of staff; Identification of professional profiles in quantitative and qualitative terms, preferable forms of inclusion in the workforce; Identification of the job profile for which they plan to recruit). More than 50 companies replied to the questionnaire and about 40 of them have then formalized their commitment to collaboration in the following phases of the project implementation.

Do companies take part in JAC's teaching process as well?
Professionals from local companies teach in JAC: 40% of JAC's teachers come from the world of education and 60% from the production sector (entrepreneurs, consultants and professionals from the job market). This guarantees the quality of teaching and constantly updated contents in relation to the evolutions and needs of the market in terms of production and technological standards, as well as know-how.

Companies' professionals directly teach in JAC and/or provide all the learning materials. Some training activities are delivered in the company's premises (e.g. labs).
Each student in JAC has 400 hrs./year of mandatory internship in a company. For internships there is a specific formal agreement between JAC-company-student.

Do companies take part in the delivery of the final exams?
Professionals may be involved in the Commission for the final exam.

Do companies assign project tasks to students? How are students assessed by companies?
During teaching activities, companies evaluate students with many types of assessment (project works, exams, presentations…), just like teachers do.
During internships, companies assess students' skills thanks to an on-going monitoring process and, at the end of the internship, they evaluate if students have reached their learning outcomes, defined at the beginning of the internship.

When you have found a company interested in working with you, it is useful to prepare a written agreement to formalize your cooperation.

TEMPLATE - AGREEMENT FORM – DEFINING CONTENTS FOR THE REACTI-VET UPSKILLING COURSE FOR STUDENTS

Company Name(s):
Responsible Person(s):
Role:
Date:

GOAL:
The Reacti-VET project aims to provide effective and necessary training and support for VET teachers to enable them to identify and respond to skill-gaps in the labor market, with the involvement of other relevant stakeholders - students, parents, teaching staff, and particularly employers experiencing difficulties in finding skilled workers to fill vacancies.
This agreement is to set a cooperation between the school ________and the company _____in order to identify skill-gaps and to design, develop and deliver upskilling training for students.

TIME FRAME:
Collecting information: from __/__/__ to __/__/__
Development of the course: __/__/__ to __/__/__
Delivery of the course: __/__/__ to __/__/__

DIVISION OF ACTIVITIES BETWEEN THE SCHOOL/INSTITUTE AND THE COMPANY:
School/institute: the school/institute is responsible for managing the whole process. It will collect information from the company (through questionnaires/interviews/focus groups) and use the information for the design of the upskilling course for students.

Company: the company must provide the school with the requested information and give a feedback on the design of the course. In addition, the company will be available for implementing activities with the students (at least 5 hours), and for preparing and evaluating a project task realized by ____ (number) students.

OBLIGATIONS:

I AGREE TO:
- Commit a minimum of 5 hours to spend on activities in presence (or online) with students;
- Cooperate with the School/institute for identifying their needs and designing the course;
- Prepare a project task, in cooperation with the school, and assess the student's final presentations;
- Provide feedback and evidence as requested.

TERMS AND CONDITIONS:

- A non-disclosure agreement will be made available to you upon request.
- All IPR owned by either party at the date of the contract is and shall remain the exclusive property of that party.
- The Reacti-VET PROJECT PARTNER ________reserves the non-exclusive right to use such IPR in the results of the Reacti-VET PROJECT for the purposes of academic research and teaching and publication.
- Please note that the Reacti-VET project wishes to use your involvement in the project as an example of a good practice. We will however seek your permission prior to releasing any material. Should you not wish to disclose any information for this purpose, please let your project partner know.

EXIT CLAUSE:
I understand that I can exit the Reacti-VET-programme at any time,

Company:
Signature (& stamp):

Reacti-VET Project Partner:
Signature (& stamp):

PHASE 2 - PRE-ASSESSMENT OF STUDENT SKILLS

What will you do in this phase?
You will develop a pre-assessment tool based on the project task identified by the company

Once you have collected information from companies about their needs and skill-gaps, you can develop a tool for investigating student's prior skills and knowledge in that area. This pre-assessment tool will allow you to tailor your upskilling course for students on the specific context of intervention.

IDENTIFICATION OF A PROJECT TASK

To start developing this tool, you will first need to receive from the company the project task they intend to assign to students. The company will have to contribute to the course preparation by creating a task that must be completed by the students throughout the course and presented at the end of the course - ideally via a public presentation (face-to-face or online, see paragraph on Final Assessment). The company, together with the teacher, will define what kind of knowledge/skills are needed to solve the proposed task. These skills must be acquired by students thanks to the lessons of the upskilling course. The task can be a real task (e.g. part of a real company project) or just a fictional, but practical, exercise. The company should send through a draft of the project task in advance, before the beginning of the course (remember to agree on timing with the company!), so that you will have more details on the requirements and competences to assess before designing the course.

You have to agree with the company on the criteria for its evaluation, too. The company will assess the project task based on pre-defined criteria, which also will be communicated when the task is actually given to students. You will then undertake a formative assessment of the students, pointing out their development (in knowledge, skills) during the course and project work (more details in the final paragraph of these Guidelines).

SELF-ASSESSMENT EX-ANTE TEST TO ASSESS PRIOR SKILLS AND KNOWLEDGE

The pre-assessment will be a self-assessment test completed anonymously by the students. You can choose the format you prefer – we suggest you use a questionnaire, as it is the easiest one to use and evaluate. Bear in mind that you will need its results before proceeding with the design of your course, so choose a smart and fast tool and be clear with your students on the necessity for honesty in their answers.

The same questionnaire will be used at the end of the course as a self-assessment test that will help students prepare for the Skills Evaluation Test and for the Final Presentation. When preparing the questions, be as clear as possible. Be sure that questions and answers are not generic or uncertain, as that may lead to flawed results. Questionnaires' results will be one of the starting points for the design of your course. Where possible, use closed questions and rating scales. Add open questions only to collect suggestions or requests.

Try to include in the self-assessment test both hard skills (which will be essential for the design of your course, as you need to know which technical competences to develop) and soft skills (they are a common basis necessary for any job). Soft skills will be assessed during the students' final presentation too. Of interest will be how students' self-assessment match your own final assessment.

Before preparing the assessment test you should already have defined the main features of your course, to ensure you include relevant questions. In fact, each answer should give you a specific indication as to how to develop your course. So, when writing questions, try to imagine which kind of answer you would want in order to improve the design of your course.

This image (https://www.cognology.com.au/learning_center/cbawhatis/) is a useful representation of how a competency based assessment works (including some on-the-job training).

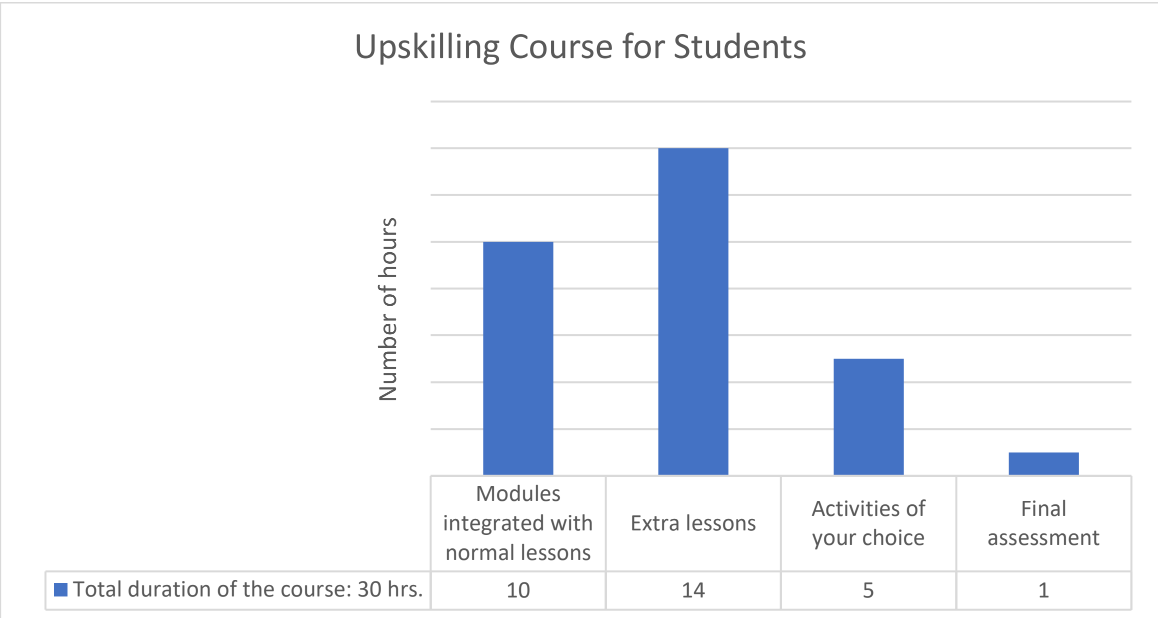
PHASE 3 - DESIGN OF THE STUDENT UPSKILLING COURSE

What will you do in this phase?
You will plan your upskilling course, defining: structure, timetable, goals, methodologies, topics and tools.

STRUCTURE OF THE COURSE

Reacti-VET's Student Upskilling Course will be a 30-hour course organized as follows:

- *10 hours: modules and activities built into (integrated) normal lessons*
- *14 hours: extra lessons (modules and activities in addition to normal lessons)*
- *5 hours: activities of your choice. Our suggestion: use them to create occasions of interaction between companies and students, virtual or face to face!*
- *1 hours: self-assessment test, skills evaluation test and final presentation.*



The table below shows a possible subdivision of the 30 hours of the course over a period of 2 months (expected duration for the entire course) and an example of the weekly organization of the teaching methodology envisaged. **You can use this table as a template for your own course or use a different scheme,** according to your customs.
Please remember that each teacher may have a different training context (different school hours, different facilities, use of a variety of tools and methodologies, etc.) and therefore it is best if you consider this table just as an example to be adapted to your needs and context.

You should not adapt your teaching methods to the Upskilling Course for Students, on the contrary, the course must be coherent with your teaching context and methods: this way it will be much less burdensome, for you and for your students!

UPSKILLING COURSE FOR STUDENTS STRUCTURE AND TIMETABLE									
	Week	Module	Embedded in ordinary lessons	Self-study	Extra lessons (theory)	Extra lessons (practice)	Workshops and meetings with SMEs	Evaluation	Total hrs per Week
Month 1	**1**	Title of Module 1	0		1	0	2	/	3h
	2	Title of Module 1	2		30’	1	0	/	3h30’
	3	Title of Module 2	2		30’	1	1	/	4h30’
	4	Title of Module 2	2		30’	2	1	/	5h30’
Month 2	**5**	Title of Module 3	1		30’	2	1	/	5h30’
	6	Title of Module 4	1		1	2	0	/	4h
	7	Title of Module 4	1		1	2	0	/	4h
	8	Self-assessment	10’	0	0	0	0	10’	1h
		Skills Evaluation Test	0	0	0	0	0	20’	
		Final exam / public presentation	0	0	0	0	0	20’	
Total			**10**		**5**	**10**	**5**	**1**	**31**

VIRTUAL OR FACE-TO-FACE?

Due to current Covid-19 restrictions, it may not always be possible to deliver a face-to-face course and to organize meetings with the SMEs and face-to-face workshops in classroom or in the premises of the involved stakeholders (local organizations or SMEs).
The Upskilling Course for Students may therefore be delivered using various approaches:

- *100% online (lessons, meetings with SMEs, assessment tests, workshops, final presentation)*
- *100% face-to-face*
- *blended mode (some activities conducted face-to-face and others virtually).*

If Covid-19 restrictions allow, we suggest the blended solution, as it has a twofold benefit: on one hand it will give you the chance to put in practice many of the topics you studied during the Reacti-VET Upskilling Training for Teachers, and on the other it will “lighten” the training course for your students. The students will learn how to study at their own pace, and they will acquire important self-organization skills.

DESIGN OF THE UPSKILLING COURSE

The course design process includes the following activities:

- ***Identifying appropriate goals****: What do you want participants to learn during the training? What will they leave knowing more about or what new skills will they have acquired?;*
- ***Choosing content*** *that's consistent with the goals;*
- *Choosing the* ***delivery methods*** *to use;*
- *Deciding the* ***time*** *allocated for each of the goals;*
- *Building the tools for* ***assessing*** *participant learning.*

As part of the design process, teachers should always take into consideration their own teaching style and the learning styles of the selected participants.

KEY ELEMENTS OF EACH MODULE

Even if the Upskilling Course is a relatively short 30-hour course, this doesn't mean that you should skip important elements of the design phase. Remember that many university courses are only 30 or 40 hours long but may have great impact on trainees.

As the course is quite short, it is preferable not to go overboard with the number of modules. Based on the pre-assessment of your students' skills and on the information provided by the company, **select only the main skills / topics that are coherent with your teaching subject and that can be effectively tackled in a short amount of time**.

> **In 30 hours, you could provide a smattering of a large variety of topics or you can choose to go in-depth on the 3-4 most important topics. The latter approach is certainly more impactful on the trainees!**

What **you need to define, for each module** of the course, is:

1. *Title;*
2. *Scope (defined after consultation with companies);*
3. *Topics (chosen together with the involved company);*
4. *Training methodology (for details on methodologies such as the Flipped Classroom or Project-based learning, please see the Upskilling Training for Teachers, Module 2 - Unit 2);*
5. *Learning materials and tools (see the Upskilling Training for Teachers, Module 3);*
6. *Duration.*

The **table below summarizes all the key elements that you will need to define** and decide on **for each module** of your course before developing the training content and delivering your course. You can use our template or create your own, just remember to include all sections!

MODULE – 1	
Title of the Module	**Precision Agriculture**
Scope and Description	How to manage differentially production factors in order to improve return of investment and reduce environmental impact.
Learning outcomes: Knowledge	• *Knowledge on variability agriculture activities* • *Knowledge on resolution agriculture activities* • *Knowledge on technology and their value* • *Knowledge on economic and environmental decision making*
Learning outcomes: Skills	• *To be able to interpret soil electric conductivity maps* • *To be able to develop an intelligent soil/plant sampling* • *To be able to understand the value of sensors and actuators used on Precision Agriculture* • *To be able to interpret yield maps* • *To be aware of the environmental impacts of agriculture*
Learning Topics	*a) Notions on the concept and principles of Precision Agriculture and the potential benefits from its use.* *b) Notions on the better techniques and technologies to evaluate field variability.* *c) Skills for implementation and/or use of precision agriculture technologies.*
Training Methodology	project-based learning (practical workshops with group activities)
Learning Materials/Tools	PPT presentations; maps; photos; videos; quiz
Estimated Duration	4 hrs.

PHASE 4 - DEVELOPMENT OF THE CONTENT

What will you do in this phase?
You will develop all training contents for your course, using different online tools and media.

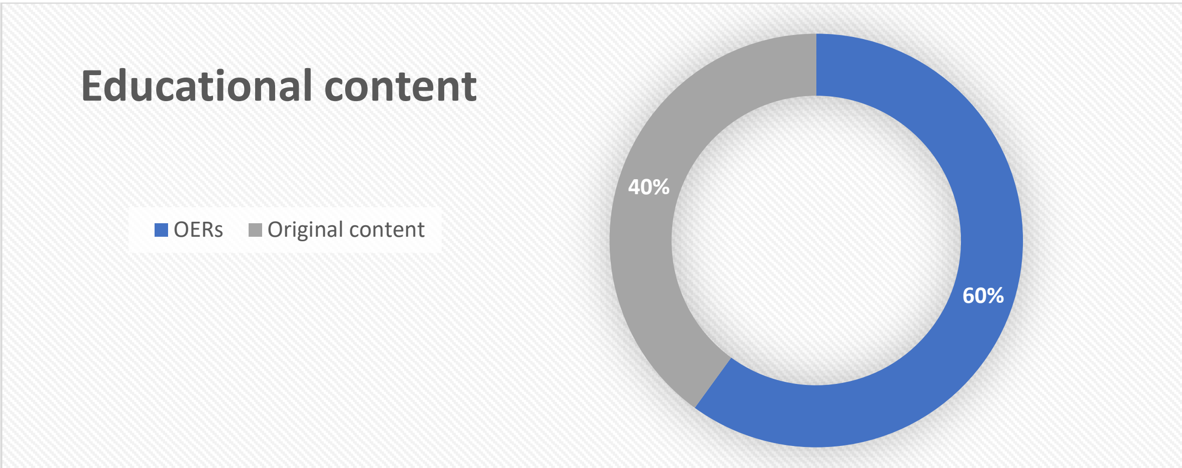
This section offers a very short overview of the tools and methodologies that you can use to build your Upskilling Course for Students, as these topics are tackled in full detail in all 5 Modules of the Reacti-VET Upskilling Training for Teachers.

INDICATORS

When developing the contents of your course, you should make sure of meeting the following standards and indicators.

OERs OR NEWLY DEVELOPED CONTENT?

When creating the contents of your course, remember that about **60%** of the learning content should be represented by **Open Educational Resources** (OERs) found on the web, while **40%** should be **newly developed content** developed in collaboration with students and companies.



For the research and selection of your OERs you can use:

- ***Search engines*** *such as Google, Bing, etc.;*
- ***Directories*** *listed in the OER Database (Module 3 of the Reacti-VET Upskilling Training for Teachers), e.g. Open Education Consortium, Learning Resource Exchange for Schools or OER Commons, among others;*
- ***Repositories*** *listed in the OER Database (Module 3), e.g. OpenLearn, Curriki, TEDed, YouTube*

Important! You should always verify that the resource you found online and that you want to use in your course is really "open". An OER can legally be used, distributed and modified; it is technically modifiable; it is freely available to the general public (see Module 3 – Unit 1 for more details on Copyright, Public Domain and Copyleft).

DIFFERENT TYPES OF CONTENT

Make sure to use at least **3 different tools from the OER Database** included in Module 3 of the Reacti-VET Upskilling Training for Teachers.
Learning material will be related to the project tasks and aligned with the missing skills determined by the consultation process with students, parents and companies. Each teacher must integrate its ordinary lessons, so content must be developed and selected accordingly. Students should not be overwhelmed with material!

CONSTRUCTION OF THE COURSE ON AN ONLINE PLATFORM

You can freely choose *if* and to what extent you want to use a **Virtual Learning Environment (VLE)** platform for your Upskilling Course for Students.
Your choice will depend on your teaching context in the next year or so. If face-to-face lessons are possible and safe in your country (with regards to the Covid-19 restrictions) you may want to use an online platform simply for the purpose of sharing documents with your students and assessing and/or keeping track of their progress while, if you are supporting distance learning due to Covid-19 restrictions, your school may probably have already organized its training offering using some kind of virtual learning environment which you can exploit for your Upskilling Course for Students.

➔ For detailed information and instructions on the use of VLEs, please refer to the Reacti-VET Upskilling Training for Teachers Module 4 – Unit 1, and if you choose Moodle as a platform to host your course, check out Module 4 – Unit 3. Microsoft Office 365 Education and Google Classroom are also briefly explained in Module 4 - Unit 3.

PHASE 5 - DELIVERY AND FINAL ASSESSMENT

What will you do in this phase?
You will deliver your course to your students and evaluate if they have acquired the identified skills and knowledge.

DELIVERY

Delivery of the 30-hour course will take place over 2 or max. 3 months. **Changing the course once you have started to deliver it is NOT a bad thing!** One may think that changing the course *in itinere* could be evidence that something went wrong in the design phase. Quite the opposite. Making modifications and changes to the course while it is ongoing proves that you are flexible and open to external inputs and suggestions coming from your students or the involved companies, and that you are willing to improve your work at every chance you get.

What we are learning here is how to build an upskilling course QUICKLY in order to respond in real time (or almost in real time) to the needs of the job market. This means that it is easy to make some mistakes or incorrect assumptions in the design phase, but also that you must be flexible enough to correct these mistakes as soon as you detect them.

As you conduct the training, you may naturally adjust the design of the course. For example, after working with the group, you may decide to change the time allocation for a particular topic or to change the type of activity associated with a particular topic, for instance, from an individual to a group activity or vice versa.

EX ANTE AND EX POST SELF-ASSESSMENT TEST

Assessment will be consistent with the learning objectives and based on an *ex ante* and *ex post* self-assessment, to prepare the students for the final evaluation, which will ultimately determine if the student is going to obtain the certificate of the Upskilling Course. Aligning assessment with intended learning outcomes is crucial. You must make sure that all Modules are covered both by the self-assessment questionnaire/test and by the final test. If you prefer, you can create several smaller tests, one for each module.

You should create a **"Self-assessment Test"** to help your students monitor their progress during the upskilling course and prepare themselves to the final assessment. The OER Database in Module 3 of the Teacher's Upskilling Course contains instructions of several tools you can use to create surveys, tests and quizzes. Among these tools it is worth mentioning:

- *Google Forms – See Module 1 - Unit 4 and Module 3 - OER Database*

- *Kahoot! – See Module 3 - OER Database*
- *Moodle (only if the whole upskilling course is available on Moodle) – See Module - Unit 3*
- *SurveyMonkey*

You should invite your students to fill in the self-assessment test (preferably online, but you can choose to deliver a paper version) at least twice: the first time before Phase 3 Design of the course (please go back to paragraph on Phase 2 - Pre-assessment of students' skills) and the second time at the end of the course. The self-assessment tests will be anonymous.
You as can use the test as a way of measuring your students level of knowledge, with respect to the skills you selected together with one or more local companies, and to verify the degree to which these skills have been acquired by the students at the end of the course.

EXTERNAL ASSESSMENT BY COMPANIES AND TEACHERS

The Upskilling Course for Students will end with the final assessment performed by both the teachers and the companies.

EVALUATING ACQUIRED SKILLS

In order to assess to what extent your students have acquired new knowledge and skills, and to verify if your course has achieved its goals and learning outcomes, you should create a **"Skills Evaluation Test"** and submit it to your students. If the Covid-19 situation will allow, it is recommended to deliver the final test in class, face-to-face. If this is not possible, please use your usual testing solutions when using distance learning.
To create the test/s, you may use the tools listed in the paragraph above ("Ex ante and ex post self-assessment test"). You may choose among different types of answers or combine them:

- *Multiple choices: trainees have to choose the correct word to complete the sentence*
- *Embedded Answers (Gap Filling): trainees fill the gap to complete the sentence*
- *Matching: trainees must link items from the first column to items in the second*
- *True / False: trainees must decide if a statement is true or false*
- *Numerical: trainees must answer the questions with numbers / percentages*
- *Short Answers: trainees must answer the questions in a synthetic way. Attention! This kind of answer is not recommended for the Self-assessment Test, because the students cannot have a feedback on what they wrote. On the other hand, it is useful to include this type of answer in the Skills Evaluation Test.*

These Guidelines do not provide a template for this test, because each team (composed by teacher, students and company/companies) will build its course on a different topic and on different skills.

FINAL PRESENTATION

In the preparatory phase, teachers will have asked the company to define a small project task related to the company's needs or problems - a task that can be approached and solved thanks to the new skills acquired by the students attending the upskilling course.
Throughout the duration of the course, students will work on the project task and prepare a digital presentation / pitch to be submitted to the company for evaluation by them and by the teachers. We suggest you leave the students free to choose what software or online tool to use for their presentation (e.g. Prezi, PowerPoint, Google Slides, videos, etc.).

According to your local context at the time the final assessment will take place (Covid-19 restrictions, lockdowns, level of commitment of the company, school facilities, etc.), in agreement with the SME/s you are collaborating with, you may choose one from the following options:

1. *Submission of an online presentation to the company who will assess it and provide feedback and evaluation (it can be a grade or a generic comment) afterwards;*

2. *Oral presentation / pitch in front of a representative of the company and teacher in via a virtual meeting - using Skype, Zoom, GoToMeeting, Google Meet or other platforms;*

3. *Oral presentation / pitch in front of the company representatives AND the whole class, face-to-face in class or at the premises of the company – perhaps at an event that includes all student presentations (we suggest short oral presentations, max. 10 min. each).*

TEACHER'S ASSESSMENT

You should consider the following criteria when assessing your students' presentations:

Ability to respond to the company's needs: Is the content of the presentation tailored and relevant for the company or is it too generic? Has the student addressed all the pain points adequately? Does he/she present a possible solution to the task presented by the company?

Ability to develop a clear, well-structured and informative presentation/ pitch that is compelling and persuasive: Did the presentation tell a story with a clear purpose at the start, clearly defined steps in the middle and a strong close? Was the content coherent and clear? Did the student make an effective use of facts, statistics and details? Were the challenges, solutions and potential risks defined clearly for the audience? Did the student summarise the key points clearly and concisely?

Ability to prepare effective slides that support and strengthen the clarity of the message: Are the slides visually impactful, with graphics, graphs or images? Did the student use other interactive resources such as videos and music? Was the language clear?
Soft skills: During the presentation, did the student appear confident, natural and in control? Has the student collaborated with others (students, parents, other stakeholders) to prepare

his task? Was he/she able to respond effectively to questions of the teacher or company during the presentation?

You will find a few templates for the assessment of the students' presentations in Annex I of the Guidelines but remember to adapt these models to your personal school and local context!

COMPANY ASSESSMENT

Companies will assess the project task based on pre-defined criteria, communicated to the teacher and the students when the task is given and explained to the students at the beginning of the course. We suggest you ask the company to provide at least a short, written assessment in order to keep records.

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ANNEX I

Template n. 1

STUDENT UPSKILLING COURSE "*TITLE*"

Presentation Evaluation Form - Teacher

Please rate the presenter by circling the appropriate number. 1= very poor and 10 = excellent

Teacher name:____
Name of the school:_______________________________________
City, Country:____
Topic:____
Student Name: ____

Presentation Content	
The introduction provided a general description of the topic, including the approach and expectations of the talk	1 2 3 4 5 6 7 8 9 10
The presentation provided thoughtful comparisons and analyses	1 2 3 4 5 6 7 8 9 10
There was a clear summary and conclusions	1 2 3 4 5 6 7 8 9 10
Overall quality of visuals (pictures, charts overheads, diagrams, etc.)	1 2 3 4 5 6 7 8 9 10
Presentation Mechanics	
An appropriate amount of material was presented	1 2 3 4 5 6 7 8 9 10
The presentation was well-organized	1 2 3 4 5 6 7 8 9 10
The presentation was professionally delivered	1 2 3 4 5 6 7 8 9 10
The presentation was done within the given time limit	1 2 3 4 5 6 7 8 9 10
The presenter responded well to questions	1 2 3 4 5 6 7 8 9 10
Overall Evaluation	
My overall rating of this presentation is	1 2 3 4 5 6 7 8 9 10

Strong points of the presentation were . . . [max 5 lines]

The presentation could have been improved most by . . . [max 5 lines]

The grading system can be changed accordingly to your school customs. It can be numeric (1-10 or 1-5), percentage Grading (from 0 to 100 %), letter grading and variations (from A to F), Pass/Fail, Narrative grading, etc.

Template n.2

STUDENT UPSKILLING COURSE "*TITLE*"

Presentation Evaluation Form - Teacher

Teacher name:____
Name of the school:_______________________________________
City, Country:____
Topic:____
Student Name: ____

Please mark the score for each evaluation criterion below. When you are finished, combine the total points at the bottom for the overall score.

Poor	Fair	Average	Good	Excellent
1	**2**	**3**	**4**	**5**

CONTENT					
Clarity of content	1	2	3	4	5
Quality of content (background, methodology, findings, etc.)	1	2	3	4	5
Originality and complexity of project	1	2	3	4	5
Relevance of the presentation for the needs of the company	1	2	3	4	5
Visual impact of the slides (use of graphics, charts, images)	1	2	3	4	5

Comments on Content:

Content Points = _____ / 25

DELIVERY					
Professional and confident	1	2	3	4	5
Engaged with audience	1	2	3	4	5
Capacity to respond to questions	1	2	3	4	5
Clear voice with good pace	1	2	3	4	5

Comments on Delivery:

Content Points = _____ / 20

OVERALL IMPRESSION	1	2	3	4	5

Overall comments:

Overall impression Points = _____ / 5

TOTAL POINTS = _____ / 50