



Intellectual Output Leader:
ISRE (Italy)

Intellectual Output #4

Readiness Scale

Participation of all partners from the perspective of their competencies

- Managers
- Teachers / Trainers
- Students

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Introduction

VACCINE project's main aim is to find solutions and tools for inclusion of vulnerable students and tools for their teachers to use modern technology and pedagogical principles. The practice is called “Hybrid” and hybrid pedagogy simply means teaching arrangements where one part of the training takes place in learning facilities and at the same time another part is done online. This project aims at having significant impact on its final target groups, students with special needs together with primary target group being teachers and trainers working with the afore mentioned students. The impact is created in elaborating and distributing concrete toolboxes for each target group. These toolboxes contain clearly defined pedagogical and didactic work methods for teachers and tools for students to take part in hybrid learning according to their personal readiness.

Prior to designing these tools, a study is made to find out which are the different levels of readiness (of teachers and students to adopt and use hybrid way of learning and teaching) and from that study, to create a readiness scale. Also, the school management and infrastructure to support teachers and students for inclusive hybrid teaching practices are studied.

Changes are often driven by external factors and the COVID 19 pandemic represent a clear example of this kind of external factors capable, by necessity or by will, to deeply influence the established habits of the students, of the educators and of the organizations. Although not an absolute innovation the worldwide scale of use of hybrid education, distance learning and new technologies in VET can be considered the main impact (outcome?) of the pandemic in our context. The end of the emergency phase does not imply a restoration of the consolidated old traditional way of learning, teaching and managing educational organizations. On the contrary the challenge is/will be how to transfer all those positive elements linked to the hybrid education into a new routine in the pedagogical practices. We should not be scared by this term but concentrate on the positive aspects and the ways hybrid pedagogy can bring many benefits for all students, teachers and the whole learning process. But, what we want to emphasise is the need for careful planning and taking care of the support for both the teachers and students to manage the complicated combination of pedagogy, digital technology and applications in the learning process in the hybrid teaching. The teacher cannot manage this alone but needs the resilient and easy-to-use infrastructure and, agreed and systematic collaboration with multiple support workers.

The concept of readiness has been debated a lot in the past: what makes a student “ready to learn”? In addition, as well, what makes a teacher or a trainer “ready to apply a certain didactic method or ready to use a certain technology in her/his teaching”? Moreover, what makes an educational institution “ready to implement an approach or a strategy in order to better reach its aims?”

Another aspect that we will try to focus on is a special attention to the needs that the most vulnerable students have, although without an official certification. We refer to students that for different reasons – social, cultural, economical – are at a concrete risk of exclusion and to become dropouts.

Although in the Vaccine application only two target groups are foreseen (teachers/trainers and students) the partnership decided to add another target group “School organizations and managers” as it’s clear that hybrid learning requires a set of distinctive competencies and knowledge strategies and technical support and infrastructure organised and coordinated by managers. If the knowledge is not available, further training measures must be organized. Moreover without a minimum of media literacy, the learning

platforms needed to implement hybrid instruction cannot be used functionally, but only partially. Simple tasks such as uploading videos, answering online questionnaires, commenting on posts, or working in virtual chat rooms become a problem. Students and teachers and/or trainers need a set of specific knowledge to implement high quality and inclusive hybrid pedagogy using the necessary hardware and software and infrastructural support.

But which are the necessary elements to build up a readiness scale for each target group?

- Definition of the topic
- Definition of the elements to be observed
- Definition of a measuring tool: the definition of a measurement tool coincides exactly with the questionnaires developed and administered within the IO3 (see Annex 1-2-3). The only change that we decided to introduce is the definition of 3 levels instead of 4, to facilitate the subsequent definition of teaching tools:
 - Basic: Competence is only minimally mastered with a low level of autonomy
 - Intermediate: Competence is partially mastered with a good level of autonomy
 - Advanced: Competence is mastered completely with an excellent level of autonomy

1. First target group: Manager Readiness Scale

Definition of role of managers in implementing and developing the hybrid pedagogy

In the project plan we just had two target groups: students and teachers/trainers. Soon it came inevitable that it is necessary to add managers here as the third group. The role of managers is to create an optimal condition for hybrid pedagogy. It is said in VACCINE IO2 Final Report:

- Suggestion for main question to get answers with the methodology and methods: What is needed in school administration and infrastructure for implementing high quality and inclusive hybrid pedagogy?

As “school manager” we here mean the staff which makes decisions in strategic and operational level for implementing hybrid pedagogy methods and tool. Managers in different level are gate keepers in acquiring, using and developing hybrid pedagogy.

Definition of the elements to be observed and a measuring tool

To form a readiness scale for managers we looked at the support role (to remove obstacles) as well as the developing role (to show the way to the future, strategic planning) of the managers. We also consider managers as bureaucrats (management) and leaders (leadership). When we put these aspects together in the framework of hybrid pedagogy teaching, we found four important items to measure:

1. The level of managers supports skills
2. Understanding of the legal framework
3. Managers own technical readiness
4. Skills in finance and management

The level of managers support skills is about how well the manager is aware of the skills and competencies of his/her staff and the possibilities to raise them with suitable further training. In this section it is also important to assess are there clear guidelines and manuals for teachers to implement hybrid pedagogy.

Understanding the legal framework means the managers ability to consider the role and meaning of hybrid pedagogy as a part of the curricula. Managers should know the possibilities of HP and how it is in line with strategies of the organisation. One part of the section is for assessing the managers knowledge of data protection.

Indeed, it is important that managers own technical readiness gives him the solid ground to be a pedagogical leader of constantly changing digital pedagogy. In this section we assess the managers understanding and knowledge of suitable equipment, facilities and environment as well in classrooms and in work-based-learning.

Skills in finance and management refer to managers knowledge about funding of hybrid pedagogy. What are the costs to consider, are they mentioned in the budget? Also the strategic planning is assessed in this section.

Table 1 – Manager Readiness Scale

Topic	Elements to be observed (descriptors)	Measuring tool (indicators)
Support skills	A - Knowledge of further education	A1) Have knowledge about actors who offer continuing education A2) Have knowledge about the breadth of the content offered A3) Have knowledge of whether the offer fits the level of knowledge of the trainer
	B - Assessing staffs' skills	B1) Have knowledge of how competent the trainer is with the concept of hybrid learning B2) Have knowledge about the quality of the trainer's hybrid learning approach B3) Have knowledge to measure the competence level/teaching level of the trainer B4) Understanding whether teaching concept is also useful for the special needs target group
	C - Assess which internal guidelines/concepts exist for hybrid learning exist	C1) Know if there is a guideline with clear quality requirements for good hybrid teaching C2) Have knowledge of whether the criteria are known to the trainers C3) Have knowledge of whether the guidelines are evaluated/adjusted by the trainers at regular intervals C4) Have knowledge of whether there is a sufficiently high level of acceptance by the instructors
	D - Organisational implementation of hybrid teaching	D1) Have knowledge of whether there is sufficient release time for staff to teach hybrid classes
Legal framework knowledge	A - Identification of constraints in the curriculum	A1) Have knowledge of the compulsory content of the curriculum A2) Possess ways to reach someone in the office A3) Have knowledge of whether trainers know the minimum standards of training A4) Have knowledge of whether training may be provided in a hybrid form A5) Have knowledge of whether the teaching organisation has a plan for the transition to hybrid teaching A6) Have knowledge of the financial impact of non-compliance with the curriculum A7) Communication with the vocational school management is in place A8) Have a plan to ensure training in case of short-time work and closure of the company

	B - Recognise the opportunities of the change in teaching	B1) The innovations are congruent with the long-term organisational development of the company B2) Being aware of the added value of the innovations for trainers, trainees and the company
	C - Knowledge of general data protection rules	C1) Have knowledge of national and European data protection rules C2) Have knowledge of an internal data protection concept to implement the data protection guidelines C3) Have knowledge about possibilities to involve external data protection experts
Technical readiness	A - Adequate number of technical resources	A1) Availability of programs, licences and equipment for use of multimedia A2) Availability of programs, licences and equipment for participatory teaching A3) Availability of programs, licences and equipment for use of social media (regarding European Data Protection Regulation) A4) Availability of tools, licences and equipment for use of gaming
	B - Appropriate facilities / environment for hybrid pedagogy	B1) availability of classrooms and other premises in school building B2) Availability of hybrid-pedagogy studios or centres B3) Availability of distance learning facilities or equipment or environment B4) Availability of virtual learning environments
	C - Hardware suitable for the implementation of work-based learning (on-the-job learning and on dual system learning in companies)	C1) Availability of hardware for students C2) Availability of hardware for employer, if necessary
Finance (and management) skills	A – Funding for further education	A1) The current level of funding corresponds with the needs and plans A2) Hybrid teaching is part of strategic development and funding A3) Level of resources for getting new programs, licences and equipment A4) Resources for developing hybrid learning environments A5) Resources for further training of staff
	B - Funding to carry out hybrid pedagogy (operational level)	B1) Possibility to change a set budget with flexible decision making B2) Possibility to change the duties and tasks of staff B3) The use of project funding for developing hybrid pedagogy B4) The use of private funding for developing hybrid pedagogy
	C - Strategic management	C1) Availability of change management tools

		C2) Availability of risk management for pedagogical actions and equipment C3) Awareness of information security and data protection C4) Collaboration with others educational organisations and stakeholders
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Extra questions for the dual system

When education and training is carried out in workplaces, some aspects of implementing hybrid pedagogical methods are different than in classroom environment. That is the case in dual system. Besides for the dual system, the same extra questions can be used in work based learning situations in non-dual educational system. The main questions are:

1. Communication with the vocational school management is in place.
2. I have a plan to ensure training in case of reduced work due to pandemic.
3. I am aware of the added value of the innovations for trainers, trainees and the company.
4. Possess ways to reach someone in the chamber of commerce or chamber of crafts or other authorities.
5. Am I able to give my trainees enough “room” (time, resources, hardware) during a normal business day, so the training can be granted?
6. Do I have a concept to measure satisfaction in the training team (Trainer and trainees)?
7. Do I have a plan if I realize that the planned curricular content cannot be trained properly in a hybrid setting?

2. Second target group: Teacher, trainer and counsellor Readiness Scale

Regarding this target group inside the final report of Intellectual Output 2 - *Design and decision of the methodology on how to create the readiness levels to do with competencies to adapt hybrid model of VET training*, we agreed to focus on three areas of skills: **pedagogical, digital and interpersonal and support.**

These three areas represent the TOPICs on which a readiness scale for Teachers and Trainers should be founded on.

Pedagogical skills include the capacity to plan, initiate, lead and develop education and teaching in both general and subject-specific knowledge of student learning. Also the necessary skills needed to evaluate the results of this process are included in the concept of pedagogical skills. In IO2, on the base of the research carried out in the first output (*Literature review - The literature review included a thorough investigation on available research text concerning empirical and experience data about the European COVID19 Spring phenomena. These data were then analysed from the perspective of the project main aim, teachers competences and their obstacles in tackling special needs students inclusion in the hybrid and blended teaching era*) we pointed out the pedagogical approach and the methodologies suitable for inclusion through hybrid teaching, underlining the competences that teachers / trainers should possess in relation to three methodologies: authentic learning, collaborative learning and flipped classroom.

Digital skills defined in our methodology are the following: basic use of multimedia, participatory tools, communication tools and digital gaming.

Interpersonal and support skills consider communication, inclusion and resilience.

For each of these TOPICs we have defined the elements that have be observed and the indicators that can allow us to measure these elements.

The table below summarizes these evidences and indicators:

Table 2 – Teacher, trainer and counsellor Readiness Scale

Topic	Elements to be observed (descriptors)	Measuring tool (indicators)
Pedagogical skills	A - Developing a learning plan using different teaching methods	A1) Use of authentic learning A2) Use of cooperative learning A3) Use of flipped classroom
	B - Choosing and using different educational resources	B1) Use of the available educational resources and tools B2) Personalize teaching (using different methods, strategies, techniques and tools)
	C - Observe students and evaluate their learning path	C1) Use appropriate and customized tools for student observation C2) Apply formative evaluation practices, alongside summative evaluation moments

		<p>C3) Use of self-assessment and peer-evaluation tools and practices</p> <p>C4) Use of key competences assessment tools</p>
	D - Take care of professional development, in a constant path of innovation	<p>D1) Be open to change and innovate</p> <p>D2) Contribute to change by proposing innovative solutions</p> <p>D3) Renew and develop my way of working, in relation to social, technological and scientific changes in education</p> <p>D4) Collaborate with colleagues to introduce innovative and inclusive educational practices</p>
Digital skills	A - Basic use of multimedia	<p>A1) Use of applications for creating multimedia presentations</p> <p>A2) Use of image editing tools</p> <p>A3) Use of video editing tools</p> <p>A4) Use of applications to deliver multimedia presentation in classroom setting</p> <p>A5) Use of applications to deliver multimedia material during web meetings</p> <p>A6) Offer clear and accessible guidance and instructions</p>
	B) Basic use of participatory tools	<p>B1) Use of chat features in online meeting</p> <p>B2) Use of group features in online meeting tools (breakout rooms)</p> <p>B3) Use of whiteboard-style collaborative tools (students drawing or placing objects together)</p> <p>B4) Assist students in using image or video co-creation (creating posters or a small video)</p>
	C) Basic use of communication tools	<p>C1) Use of typical webconferencing tool</p> <p>C2) Use of microblogs (Twitter)</p> <p>C3) Use of photo or video sharing</p> <p>C4) Use of social networking (Facebook)</p> <p>C5) Use of messaging tools (WhatsApp)</p>
	D) Using digital gaming	<p>D1) Use of quiz type games</p> <p>D2) Use of simulations</p> <p>D3) Use of interactive games (games in which participants work together to reach the goal)</p>
Interpersonal and support skills: Support of Inclusion	A) Attitudes and communication styles	<p>A1) Be fair and just in teaching practices</p> <p>A2) Be sensitive and responsive in listening and recognizing diversity among students</p> <p>A3) Give special support without segregating and labeling</p> <p>A4) Focus on strengths and abilities that are recognized and invite to participate and contribute</p> <p>A5) During hybrid situation, recognize students feelings</p>
	B) Promoting participation and individualization	<p>B1) Recognize student's skills, and utilize them in your teaching in a hybrid learning environment</p> <p>B2) Let the students collaborate on learning tasks</p>

		<p>B3) Involve learners offering safe learning environment</p> <p>B4) Actively prevent bullying</p> <p>B5) Support learning in student's weak areas</p> <p>B7) Coordinate and lead firmly</p>
	C) The use of digital channels in the inclusion process	<p>C1) Competence in getting distance participants and face to face participants equally present in teaching</p> <p>C2) Competence in getting all the students to participate and actively contribute to learning</p> <p>C3) Competence in empowering, inviting, and inciting all the students</p> <p>C4) Competence in organizing and coordinating special pedagogical support for learning</p> <p>C5) I offer clear and accessible guidance and instructions</p> <p>C6) Skills in searching and trying suitable media for different students</p>
	D) Teachers' mental resources and resilience	<p>D1) I build up and support student confidence and self-esteem</p> <p>D2) My level of resilience</p> <p>D3) Competence in building up strong and positive relationships</p>

Only for teachers in Dual System: In a dual system VET, the student has a contract with an enterprise and learns the profession in an "on-the-job"-setting. Normally a student spend approximately 75 %- 80% of their time in an enterprise (=mainly practical input) and 20 %- 25 % in a state school (=mainly theoretical input).

Teaching in dual system		A) Specific competences	<p>A1. Manage resources to train my apprentices in a hybrid environment at the workplace during the running business</p> <p>A2. Hybrid skills are sufficient for a successful training during a work day</p> <p>A3. Build a good contact to the teachers in the school (within the dual system)</p> <p>A4. Teach relevant curricular content regarding practical training</p> <p>A5. Being aware of the special methods needed when some trainees are at work and some at home at the same time</p> <p>A6. Recognize the skill development of my trainees in a hybrid setting</p>
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3. Third target group: Student Readiness Scale

The main question orientating observations and interviews with students was: how have the students experienced the hybrid pedagogical practices used in vocational education and training (during Covid19-pandemics)? With this question we wanted to develop more concrete questions of the readiness of the students to participate and learn in hybrid situations in vocational education.

In the methodology report IO2 we suggested that for studying the student perspective and the interpersonal and support skills of the teachers to get information for the readiness scale of students, we needed to focus on different learning environments and study collaboratively teaching and learning activities in different environments and how students had experienced those. For getting similar information from each participating national vocational education practices, we worked on formulating and developing shared questions for students to build up the readiness scale. We defined the readiness scale of the students as a tool for teachers and managers to consider all the aspects that needs to be taken care of for ensuring that all the students can participate fully in the hybrid learning situations and that the teaching practices are accessible for them.

Experiences of the implementing the questionnaires for students

What have you found out and how to interpret the findings?

How can we use the findings in developing the readiness scale?

Italian experiences:

- the results of the questionnaire are a bit hard to interpret and some controversial results makes to wonder if the students have understood the questions; the results are quite fragmentary but gives some good thoughts to think over when working further in the project
- the evidences and indicators that have been analyzed in the questionnaire are however very useful to understand if a student is able to interact effectively in a hybrid learning environment or if he needs specific support in some aspects
- in particular, the variables that make up the readiness scale can provide teachers, both at individual and group level, with information to understand which areas can be used as strengths for the development of inclusive hybrid environments and which ones as critical points, on which it is necessary to develop appropriate educational interventions

German experiences:

- Regarding the open questions of the questionnaire: The filling of the questions must always be made together with a teacher/trainer who has knowledge of the questionnaire-aim and even the project aims.

Finnish experiences:

- the excel formula was quite difficult to implement. The results are delivered in an excel file and overall interpretations can be made based on those. But as the answers are so few (24 students) and the filling of the formula was quite difficult for the students, the reliability of the answers are doubtful.

Overall it has been a good process to develop and pilot the questionnaire and the questions we want to pose for the students. But as the results are quite limited and it is not possible to make any deep analysis of the answers or to generalise student perspectives based on the results, we will concentrate instead on developing the readiness scale.

How to proceed in developing the readiness scale for students?

In the Vaccine IO3 we developed an interview guide with students in which we divided four aspects or topics for the readiness for inclusive hybrid pedagogy – these can be used as a basis for the student readiness scale under these topics.

Table 3 – Student Readiness Scale

Topic	Elements to be observed (descriptors)	Measuring tool (indicators)
Hybrid learning environment	A - Well-being in learning environments	A1) Type of support for hybrid learning A2) Type of support for social media A3) Type of support for self-confidence in hybrid environments
	B – Digital devices available at school	B1) Type of digital devices available at school (smartphone, tablet, computer, smartboard, smartglasses, others...)
	C – Digital devices available at home	C1) Type of digital devices available at home (smartphone, tablet, computer, smartboard, smartglasses, others...)
	D – Technical support	D1) Presence of a support in case of technical difficulties with the use of digital instruments
Digital skills	A – Multimedia skills in learning	A1) If the teacher is using digital tools it is easy to follow teaching A2) Use of digital tools to create content A3) Edit videos A4) Edit photos A5) During class it is easy to present multimedia content to others
	B - Skills in using online participatory tools	B1) Using chat in the online lessons B2) It is easy to do group work in online lessons (like in breakout rooms) B3) Using online whiteboards (e.g. Padlet, Jamboard etc.) B4) Making pictures or video
	C - Skills in communication and social media tools	C1) Ability to use of Zoom, Teams or Meet C2) Ability to use Twitter C3) Ability to use photo or video sharing (Instagram, TikTok, YouTube) C4) Ability to use Facebook C5) Ability to use messaging tools (like WhatsApp)

	D - Skills in using virtual games in learning	D1) Ability to play quiz type games D2) Ability to play simulations like driving games D3) Ability to play games in which group works together to reach the goal
Social skills	A - Attitudes and communication style	A1) Cooperation with peers A2) Cooperation with teachers A3) Using strengths and abilities to participate to group or class works A4) Express feelings in hybrid learning environment A5) Listening and recognizing diversity among peers

Annex 1

Managers self-assessment questionnaire

Foreword

This questionnaire is part of Erasmus+ project VET and COVID-era challenges in inclusion of special needs students, VACCINE - The project aims to support pedagogical and digital skills development of VET teachers. By filling out this questionnaire and reviewing the results, managers have a chance to get individual information of their own present status, thus raising the awareness of readiness in total.

A manager's knowledge of the starting point in his or her organization is crucial when changing from a traditional classroom based learning setting to a hybrid learning environment. The demands regarding staff's competencies, technical requirements etc. are generally high. These are not only new to many learning organizations, but also challenging. Important internal knowledge, dealing with variables such as legal framework, support of staff or technical infrastructure, must be thoroughly examined, before a successful change can take place.

Each individual manager should afterwards be able to reflect and to take suitable actions according to these results, raising the overall chance of a successful change to a hybrid learning environment. The result is only for your own reflection and will be handled anonymously.

Glossary

Manager (CEO/Principal etc.):

A person who takes decisions in vocational training; responsibility for the trainees and the budget of the company/school/institution.

Continuing education:

Continuing education refers to vocational measures such as courses, retraining and master classes. These measures primarily serve the acquisition of knowledge, competence of the person undergoing further training.

Guideline:

Guideline means, in the organization (school or enterprise) provided action regulation in different activity ranges as well as to different topics. It has a slightly binding character.

Curriculum:

Is a description of what, why, how and how well students should learn in a systematic way. The curriculum is not an end in itself but rather a means to fostering quality learning. (Source: UNESCO IBE 2011) The content of the curriculum, which is binding for the trainees, can be set up by a wide variety of institutions like schools or enterprises.

Knowledge of the privacy policy:

Stakeholders, be they schools or companies, collect information and usually have an obligation to prove it. This means that they must prove that the requirements of national/international data protection guidelines have been met. They must ensure that data protection guidelines are in place and that appropriate measures are implemented.

European Data Protection Regulation (GDPR):

Is a regulation in EU law on data protection and privacy in the European Union (EU) and the European Economic Area (EEA).

Hybrid pedagogy:

A method refers to a classroom session that is attended remotely by some participants and in-person by others.

Distance learning:

Distance learning means learning that is not tied to time and place.

Virtual learning:

Teaching that takes place virtually.

Hardware:

Any physical component of a computer system containing a circuit board, or electronics, for example the screen and mouse.

Strategic management:

Ongoing planning, monitoring, analysis and assessment of all necessities an organization needs to meet its goals and objectives.

Change management:

Is a systematic approach to dealing with the transition or transformation of an organization's goals, processes or technologies.

Risk management:

The process of identifying, assessing and controlling threats to an organization's capital and earnings.

Instructions for filling out the questionnaire (printed version)

Instruction 1: Mark with a cross the level in which you recognize yourself best by thinking about your teaching practice

Instruction 2: Please only one value per row

Instructions for filling out the questionnaire (excel version)

Instruction 1: Insert number 1 in the cell that you think best describes your skill

Instruction 2: Please only one value per row

BASIC	INTERMEDIATE	ADVANCED
	1	
1		
		1

Evaluate your support skill levels

Descriptors	A) Evaluate your knowledge of further education			
Indicators	A1) Have knowledge about actors who offer continuing education	1 basic	2 intermediate	3 advanced
	A2) Have knowledge about the breadth of the content offered.	1 basic	2 intermediate	3 advanced
	A3) Have knowledge of whether the offer fits the level of knowledge of the trainer.	1 basic	2 intermediate	3 advanced
Descriptors	B) Assessing your staffs' skills			
Indicators	B1) Have knowledge of how competent the trainer is with the concept of hybrid learning.	1 basic	2 intermediate	3 advanced
	B2) Have knowledge about the quality of the trainer's hybrid learning approach.	1 basic	2 intermediate	3 advanced
	B3) Have knowledge to measure the competence level/teaching level of the trainer.	1 basic	2 intermediate	3 advanced
	B4) Understanding whether teaching concept is also useful for the special needs target group	1 basic	2 intermediate	3 advanced
Descriptors	C) Assess which internal guidelines/concepts exist for hybrid learning exist			
Indicators	C1) Know if there is a guideline with clear quality requirements for good hybrid teaching	1 basic	2 intermediate	3 advanced
	C2) Have knowledge of whether the criteria are known to the trainers	1 basic	2 intermediate	3 advanced
	C3) Have knowledge of whether the guidelines are evaluated/adjusted by the trainers at regular intervals.	1 basic	2 intermediate	3 advanced
	C4) Have knowledge of whether there is a sufficiently high level of acceptance by the instructors.	1 basic	2 intermediate	3 advanced
Descriptors	D) Organisational implementation of hybrid teaching			
Indicators	D1) Have knowledge of whether there is sufficient release time for staff to teach hybrid classes	1 basic	2 intermediate	3 advanced

Evaluate your understanding of the legal framework

Descriptors	A) Identification of constraints in the curriculum			
Indicators	A1) Have knowledge of the compulsory content of the curriculum.	1 basic	2 intermediate	3 advanced
	A2) Possess ways to reach someone in the office	1 basic	2 intermediate	3 advanced
	A3) Have knowledge of whether trainers know the minimum standards of training	1 basic	2 intermediate	3 advanced
	A4) Have knowledge of whether training may be provided in a hybrid form	1 basic	2 intermediate	3 advanced
	A5) Have knowledge of whether the teaching organisation has a plan for the transition to hybrid teaching.	1 basic	2 intermediate	3 advanced
	A6) Have knowledge of the financial impact of non-compliance with the curriculum.	1 basic	2 intermediate	3 advanced

	A7) Communication with the vocational school management is in place.	1 basic	2 intermediate	3 advanced
	A8) I have a plan to ensure training in case of short-time work and closure of the company	1 basic	2 intermediate	3 advanced
Descriptors	B) Recognise the opportunities of the change in teaching			
Indicators	B1) I know whether the innovations are congruent with the long-term organisational development of the company.	1 basic	2 intermediate	3 advanced
	B2) I am aware of the added value of the innovations for trainers, trainees and the company	1 basic	2 intermediate	3 advanced
Descriptors	C) Assess your knowledge of general data protection rules			
Indicators	C1) Have knowledge of national and European data protection rules.	1 basic	2 intermediate	3 advanced
	C2) Have knowledge of an internal data protection concept to implement the data protection guidelines	1 basic	2 intermediate	3 advanced
	C3) Have knowledge about possibilities to involve external data protection experts.	1 basic	2 intermediate	3 advanced

Evaluate your technical readiness

Descriptors	A) Adequate number of technical resources			
Indicators	A1) availability of programs, licences and equipment for use of multimedia	1 basic	2 intermediate	3 advanced
	A2) availability of programs, licences and equipment for participatory teaching	1 basic	2 intermediate	3 advanced
	A3) availability of programs, licences and equipment for use of social media (regarding European Data Protection Regulation)	1 basic	2 intermediate	3 advanced
	A4) availability of tools, licences and equipment for use of gaming	1 basic	2 intermediate	3 advanced
Descriptors	B) Appropriate facilities / environment for hybrid pedagogy			
Indicators	B1) availability of classrooms and other premises in school building	1 basic	2 intermediate	3 advanced
	B2) Availability of hybrid-pedagogy studios or centres	1 basic	2 intermediate	3 advanced
	B3) Availability of distance learning facilities or equipments or environment	1 basic	2 intermediate	3 advanced
	B4) Availability of virtual learning environments	1 basic	2 intermediate	3 advanced
Descriptors	C) Hardware suitable for the implementation of work-based learning (on-the-job learning and on dual system learning in companies)			
Indicators	C1) Availability of hardware for students	1 basic	2 intermediate	3 advanced
	C2) Availability of hardware for employer, if necessary	1 basic	2 intermediate	3 advanced

Evaluate your Finance (and management) skill levels

Descriptors	A) Evaluate your knowledge of further education			
Indicators	A1) How the current level of funding corresponds with the needs and plans?	1 basic	2 intermediate	3 advanced
	A2) Is hybrid teaching part of strategic development and funding?	1 basic	2 intermediate	3 advanced
	A3) How is the level of resources for getting new programs, licences and equipment	1 basic	2 intermediate	3 advanced
	A4) What are the resources for developing hybrid learning environments	1 basic	2 intermediate	3 advanced
	A5) What are the resources for further training of staff	1 basic	2 intermediate	3 advanced
Descriptors	B) Is the funding to carry out hybrid pedagogy sufficient? (operational level)			
Indicators	B1) Possibility to change a set budget with flexible decision making?	1 basic	2 intermediate	3 advanced
	B2) Possibility to change the duties and tasks of staff	1 basic	2 intermediate	3 advanced
	B3) The use of project funding for developing hybrid pedagogy	1 basic	2 intermediate	3 advanced
	B4) The use of private fundings for developing hybrid pedagogy	1 basic	2 intermediate	3 advanced
Descriptors	C) Strategic management			
Indicators	C1) Availability of change management tools	1 basic	2 intermediate	3 advanced
	C2) Availability of risk management for pedagogical actions and equipment	1 basic	2 intermediate	3 advanced
	C3) Awareness of information security and data protection	1 basic	2 intermediate	3 advanced
	C4) Collaboration with others educational organisation and stakeholders	1 basic	2 intermediate	3 advanced

Annex 2

Teachers/Trainers self-assessment questionnaire

Foreword

COVID19 pandemic effects have revealed new ongoing needs for new VET hybrid practices. During the sudden change on spring 2020 VET organisations started organize teaching and training online with some background, but not carefully planned model suitable for all pedagogical needs. Students with learning difficulties and problems with inclusion suffered the most. The real danger is that these students will drop out from their studies due to several different reasons: socio-economic, behavioural and learning style-related challenges. VACCINE¹ Project's main aim is to find solutions and tools for inclusion of students with special educational needs and tools for their teachers to use modern technology and pedagogical principles. The practice is called "Hybrid" and hybrid pedagogy simply means teaching arrangements where one part of the training takes place in learning facilities and at the same time another part is done online. This project aims at having significant impact on its final target groups, students with special needs together with primary target group being teachers and trainers working with the aforementioned students. The impact is created in elaborating and distributing concrete toolboxes for each target group. These toolboxes contain clearly defined pedagogical and didactic work methods for teachers and tools for students to take part in hybrid learning according to their personal readiness.

The purpose of this questionnaire is to define a "readiness scale" regarding the skills of trainers in managing hybrid learning environments.

The questionnaire is divided into three areas: pedagogical, digital and interpersonal skills.

¹ ERASMUS VACCINE – VET AND COVID-ERA CHALLENGES IN INCLUSION OF SPECIAL NEEDS STUDENTS
020-1-FI01-KA226-VET-092679

Partners:

Finland

- Kiiipula Foundation - project manager. Runs Kiiipula Vocational College which organizes pathways for upper secondary vocational qualifications and preparatory education with disadvantaged individuals. www.kiipula.fi/en/front-page/

- Tampere University of Applied Sciences TAMK: is a professional higher education institution oriented towards working life and RDI (Research, Development and Innovation) cooperation. Our strengths are multidisciplinary education, creativity and a strong international profile. www.tuni.fi/en

- TREDU: Tampere Vocational College Tredu is an upper secondary level regional college in Tampere. Today there are about 12,500 students with basic professional qualifications, 1,800 students with additional qualifications, 1,200 students with specialized qualifications. www.tredu.fi/en/index.html

Germany

- bildungsmarkt unternehmensverbund: is a non-governmental non-profit company, which has been hiring and qualifying people for the job market since 1986 in Berlin. Currently, 3,000 youth and young adults are being trained in one of over twenty training facilities. www.bildungsmarkt.de/english/

Austria

Research and Innovation Management GmbH: is a private company that plans and develops cutting-edge research and innovation projects. It deals with the future-oriented structuring of research and innovation in order to help other entities overcome new challenges. <http://www.rim.eu.com/>

Italy

ISRE – Salesian International Superior Institute of Educational Research - ISRE is inspired by evangelical values and by the Salesian educational tradition with particular attention to the world of young people and to all those involved in their education and formation. It operates above all in the educational field, organizing study and research activities, training of trainers, highly qualified courses, also through programs that allow the knowledge and experimentation of innovative experiences and good practices at national and international level. <https://www.isre.it/>

It requires trainers to self-assess on different descriptors and indicators of competence.

We ask you to answer with the sincerity, as the questionnaire is completely anonymous and the results are used only for the study project for the definition of the “readiness scale”. The questionnaire is accompanied by a glossary to clarify the meaning of some specific terms.

Glossary

Authentic Learning: In education, the term authentic learning refers to a wide variety of educational and instructional techniques focused on connecting what students are taught in school to real-world issues, problems, and applications. The basic idea is that students are more likely to be interested in what they are learning, more motivated to learn new concepts and skills, and better prepared to succeed in college, careers, and adulthood if what they are learning mirrors real-life contexts, equips them with practical and useful skills, and addresses topics that are relevant and applicable to their lives outside of school.

Cooperative learning: refers to methodologies and environments in which learners engage in a common task where each individual depends on and is accountable to each other. These include both face-to-face conversations and computer discussions (online forums, chat rooms, etc.). Thus, collaborative learning is commonly illustrated when groups of students work together to search for understanding, meaning, or solutions or to create an artifact or product of their learning.

Communication tool: A communication tool is a tool or a method that supports a community in discussing topics of common interest. This can further refer to three forms of electronic communication in hybrid education: chat rooms, videoconferencing, and audio communication tools.

Flipped Classroom: The basic idea behind the «Flipped Classroom» is that the lesson becomes homework while the time in class is used for collaborative activities, experiences, debates, and workshops. In this scenario, the teacher does not play the role of a lead actor but becomes a kind of facilitator, the director of the educational activities.

Formative Evaluation: Formative assessments are in-process evaluations of student learning that are typically administered multiple times during a unit, course, or academic program. The general purpose of formative assessment is to give educators in-process feedback about what students are learning or not learning so that instructional approaches, teaching materials, and academic support can be modified accordingly. Formative assessments are usually not scored or graded, and they may take a variety of forms, from more formal quizzes and assignments to informal questioning techniques and in-class discussions with students.

Gaming: A game is a system in which players engage in an abstract challenge defined by rules, interactivity, and feedback that results in a quantifiable outcome or objective, often eliciting an emotional reaction. The system has a clear beginning, middle, and end in which the learner dedicates specific time to engage in the game. Additionally, games are a certain form of isolation from other activities. It's hard to play a board game while exercising on a treadmill (Alsawaier, 2018).

Educational games are games explicitly designed with educational purposes, or which have incidental or secondary educational value. All types of games may be used in an educational environment, however educational games are games that are designed to help people learn about certain subjects, expand concepts, reinforce development, understand a historical event, or culture, or assist them in learning a skill as they play (“GAME BASED LEARNING,” 2014). Game types include board, card, and video games.

Hybrid Learning: The term blended learning is generally applied to the practice of using both online and in-person learning experiences when teaching students. In a blended-learning course, for example, students might attend a class taught by a teacher in a traditional classroom setting, while also independently completing online components of the course outside of the classroom. In this case, in-class time may be either replaced or supplemented by online learning experiences, and students would learn about the same topics online as they do in class—i.e., the online and in-person learning experiences would parallel and complement one another

Inclusive pedagogy: Inclusive pedagogy is pedagogy as inviting, inciting, and supporting equal participation, contribution and self-determination of different students and student groups in different learning environments.

Learning plan: the terms “learning plan” frequently refers to a Curriculum. The term curriculum refers to the lessons and academic content taught in a school or in a specific course or program. In many cases, teachers develop their own curricula, often refining and improving them over years, although it is also common for teachers to adapt lessons and syllabi created by other teachers, use curriculum templates and guides to structure their lessons and courses, or purchase prepackaged curricula from individuals and companies.

Multimedia: Multimedia is a technique (such as the combining of sound, video, and text) for expressing ideas (as in education, entertainment, or art) in which several media are employed

Participatory tool: Collaboration is commonly defined as working with another individual or group to achieve something. Definition of a participatory tool is simply a technology or a tool in form of application or online service that can be used to help people work together to achieve a common goal or objective (“What Are Collaboration Tools?- Definition & Types,” 2016).

Personalized teaching: The term personalized teaching, or *personalization*, refers to a diverse variety of educational programs, learning experiences, instructional approaches, and academic-support strategies that are intended to address the distinct learning needs, interests, aspirations, or cultural backgrounds of individual students. Personalized Teaching may also be called student-centered learning, since the general goal is to make individual learning needs the primary consideration in important educational and instructional decisions, rather than what might be preferred, more convenient, or logistically easier for teachers and schools.

Peer-assessment: Peer assessment or peer review provides a structured learning process for students to critique and provide feedback to each other on their work. It helps students develop lifelong skills in assessing and providing feedback to others, and also equips them with skills to self-assess and improve their own work.

Self-assessment: Self-assessment is an assessment tool used by students to evaluate the quality of their work, measure their performance with the stated goals and learning objectives, identify the strengths and weaknesses in their work and implement revision accordingly

Summative Evaluation: Summative assessments are used to evaluate student learning at the conclusion of a specific instructional period—typically at the end of a unit, course, semester, program, or school year. Summative assessments are typically scored and graded tests, assignments, or projects that are used to determine whether students have learned what they were expected to learn during the defined instructional period.

Instructions for filling out the questionnaire (printed version)

Instruction 1: Mark with a cross the level in which you recognize yourself best by thinking about your teaching practice

Instruction 2: Please only one value per row

Instructions for filling out the questionnaire (excel version)

Instruction 1: Insert number **1** in the cell that you think best describes your skill

Instruction 2: Please **only** one value per row

BASIC	INTERMEDIATE	ADVANCED
	1	
1		
		1

Pedagogical skills

Descriptors	D) Developing a learning plan using different teaching methods			
Indicators	A1) Use of authentic learning	1 basic	2 intermediate	3 advanced
	A2) Use of cooperative learning	1 basic	2 intermediate	3 advanced
	A3) Use of flipped classroom	1 basic	2 intermediate	3 advanced
Descriptors	E) Choosing and using different educational resources			
Indicators	B1) Use of the available educational resources and tools	1 basic	2 intermediate	3 advanced
	B2) Personalize teaching (using different methods, strategies, techniques and tools)	1 basic	2 intermediate	3 advanced
	B3) Set up a hybrid learning environment for a specific activity	1 basic	2 intermediate	3 advanced
Descriptors	F) Observe students and evaluate their learning path			
Indicators	C1) Use appropriate and customized tools for student observation	1 basic	2 intermediate	3 advanced
	C2) Apply formative evaluation practices, alongside summative evaluation moments	1 basic	2 intermediate	3 advanced
	C3) Use of self-assessment and peer-evaluation tools and practices	1 basic	2 intermediate	3 advanced
	C4) Use of key competences assessment tools	1 basic	2 intermediate	3 advanced
Descriptors	G) Take care of your professional development, in a constant path of innovation			
Indicators	D1) Be open to change and innovate	1 basic	2 intermediate	3 advanced
	D2) Contribute to change by proposing innovative solutions	1 basic	2 intermediate	3 advanced
	D3) Renew and develop my way of working, in relation to social, technological and scientific changes in education	1 basic	2 intermediate	3 advanced
	D4) Collaborate with colleagues to introduce innovative and inclusive educational practices	1 basic	2 intermediate	3 advanced

Digital skills

Descriptors	A) Evaluate your teaching use of multimedia			
Indicators	A1) Use of applications for creating multimedia presentations	1 basic	2 intermediate	3 advanced
	A2) Use of image editing tools	1 basic	2 intermediate	3 advanced
	A3) Use of video editing tools	1 basic	2 intermediate	3 advanced
	A4) Use of applications to deliver multimedia presentation in classroom setting	1 basic	2 intermediate	3 advanced
	A5) Use of applications to deliver multimedia material during web meetings	1 basic	2 intermediate	3 advanced

	A6) Offer clear and accessible guidance and instructions	1 basic	2 intermediate	3 advanced
Descriptors	B) Teaching Use of online participatory tools			
Indicators	B1) Use of chat features in online meeting	1 basic	2 intermediate	3 advanced
	B2) Use of group features in online meeting tools (breakout rooms)	1 basic	2 intermediate	3 advanced
	B3) Use of whiteboard-style collaborative tools (students drawing or placing objects together)	1 basic	2 intermediate	3 advanced
	B4) Assist students in using image or video co-creation (creating posters or a small video)	1 basic	2 intermediate	3 advanced
Descriptors	C) Your teaching skills in communication and social media tools			
Indicators	C1) Use of typical webconferencing tool	1 basic	2 intermediate	3 advanced
	C2) Use of microblogs (Twitter)	1 basic	2 intermediate	3 advanced
	C3) Use of photo or video sharing	1 basic	2 intermediate	3 advanced
	C4) Use of social networking (Facebook)	1 basic	2 intermediate	3 advanced
	C5) Use of messaging tools (WhatsApp)	1 basic	2 intermediate	3 advanced
Descriptors	D) Your Use of games in teaching			
Indicators	D1) Use of quiz type games	1 basic	2 intermediate	3 advanced
	D2) Use of simulations	1 basic	2 intermediate	3 advanced
	D3) Use of interactive games (games in which participants work together to reach the goal)	1 basic	2 intermediate	3 advanced

Interpersonal and support skills

Descriptors	A) Attitudes and communication styles			
Indicators	A1) Be fair and just in teaching practices	1 basic	2 intermediate	3 advanced
	A2) Be sensitive and responsive in listening and recognizing diversity among students	1 basic	2 intermediate	3 advanced
	A3) Give special support without segregating and labeling	1 basic	2 intermediate	3 advanced
	A4) Focus on strengths and abilities that are recognized and invite to participate and contribute	1 basic	2 intermediate	3 advanced
	A5) During hybrid situation, recognize students feelings	1 basic	2 intermediate	3 advanced
Descriptors	B) Promoting participation and individualization			

Indicators	B1) Recognize student's skills, and utilize them in your teaching in a hybrid learning environment	1 basic	2 intermediate	3 advanced
	B2) Let the students collaborate on learning tasks	1 basic	2 intermediate	3 advanced
	B3) Involve learners offering safe learning environment	1 basic	2 intermediate	3 advanced
	B4) Actively prevent bullying	1 basic	2 intermediate	3 advanced
	B5) Support learning in student's weak areas	1 basic	2 intermediate	3 advanced
	B6) Coordinate and lead firmly	1 basic	2 intermediate	3 advanced
Descriptors	C) The use of digital channels in the inclusion process			
Indicators	C1) Competence in getting distance participants and face to face participants equally present in teaching	1 basic	2 intermediate	3 advanced
	C2) Competence in getting all the students to participate and actively contribute to learning	1 basic	2 intermediate	3 advanced
	C3) Competence in empowering, inviting, and inciting all the students	1 basic	2 intermediate	3 advanced
	C4) Competence in organizing and coordinating special pedagogical support for learning	1 basic	2 intermediate	3 advanced
	C5) I offer clear and accessible guidance and instructions	1 basic	2 intermediate	3 advanced
	C6) Skills in searching and trying suitable media for different students	1 basic	2 intermediate	3 advanced
Descriptors	D) Teachers' mental resources and resilience			
Indicators	D1) I build up and support student confidence and self-esteem	1 basic	2 intermediate	3 advanced
	D2) My level of resilience	1 basic	2 intermediate	3 advanced
	D3) Competence in building up strong and positive relationships	1 basic	2 intermediate	3 advanced

These additional questions are only for organizations who train their students within a dual system.

In a dual system VET, the student has a contract with an enterprise and learns the profession in an “on-the-job”-setting. Normally a student spend approximately 75 %- 80% of their time in an enterprise (=mainly practical input) and 20 %- 25 % in a state school (=mainly theoretical input)

Descriptors	Teaching in dual system			
Indicators	E1) I have enough time and resources to train my apprentices in a hybrid environment at the workplace during the running business	1 basic	2 intermediate	3 advanced
	E2) My hybrid skills are sufficient for a successful training during a work day	1 basic	2 intermediate	3 advanced
	E3) I do have a good contact to the teachers in the school (within the dual system)	1 basic	2 intermediate	3 advanced
	E4) I am able to teach relevant curricular content regarding practical training	1 basic	2 intermediate	3 advanced
	E5) I am aware of the special methods needed when some trainees are at work and some at home at the same time	1 basic	2 intermediate	3 advanced
	E6) I am able to recognize the skill development of my trainees in a hybrid setting	1 basic	2 intermediate	3 advanced

Annex 3

Students self-assessment questionnaire

Introduction for teachers

Use this questionnaire with your class either by asking the whole class questions or by letting them fill the table themselves

If you ask a hand-vote, mark the number of answers to this table.

What is needed in hybrid situation to support your learning?

Interview individual student or ask the group. Mark down the most relevant results.

A) What kind of support do you need to feel comfortable in hybrid learning?

--

B) What kind of support do you need in using social media for studying?

--

C) What kind of support do you need for your self-confidence when studying in hybrid situations?

--

Evaluate your own digital skill levels

A) Evaluate your multimedia skills in learning

A1) If the teacher is using digital tools it is easy for me to follow teaching

A2) It is easy for me to use digital tools to create content

A3) It is easy for me to edit videos

A4) It is easy for me to edit photos

A5) During class It is easy for me to present multimedia content to others

No	Yes

B) Evaluate your skills in using online participatory tools

B1) It is easy for me to use chat in the online lessons

B2) It is easy for me to do group work in online lessons (like in breakout rooms)

B3) It is easy for me to use online whiteboards (e.g. Padlet, Jamboard etc.)

B4) It is easy for me to make a picture or a video

No	Yes

C) Evaluate your skills in communication and social media tools

C1) It is easy for me to use Zoom, Teams or Meet

C2) It is easy for me to use Twitter

C3) It is easy for me to use photo or video sharing (Instagram, TikTok, YouTube)

C4) It is easy for me to use Facebook

C5) It is easy for me to use messaging tools (like WhatsApp)

No	Yes

D) Evaluate your skills in using games in learning

D1) It is easy for me to play quiz type games

D2) It is easy for me to play simulations like driving games

D3) It is easy for me to play games in which group works together to reach the goal)

No	Yes

Evaluate your social skills in hybrid studying

A) It is easy for me to cooperate with my peers in hybrid studying

B) It is easy for me to cooperate with teachers in hybrid studying

No	Yes
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

C) I can use my strengths and abilities in hybrid studying

C1) In group work in digital environments

C2) In classroom work

No	Yes
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

D) It is easy for me to express feelings in hybrid learning environment

No	Yes
<input type="checkbox"/>	<input type="checkbox"/>

E) When collaborating with my peer students

E1) It is easy for me to listen and understand different persons

E2) It is easy for me to find my own role in group work

E3) It is easy for me to collaborate with different persons

No	Yes
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>