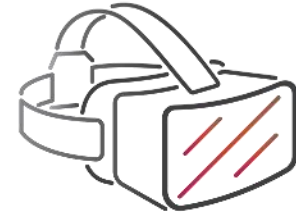# Module 4 – Unit 1: How do I know when VR is suitable for my teaching - and especially when it is not?

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Co-funded by the
Erasmus+ Programme
of the European Union

What this unit is about:

Using VR in the classroom is not an easy undertaking. It requires extensive organisational preparation, a high level of motivation and innovation from many different stakeholders (teachers, learners, management of the educational institution, possibly parental consent, etc.), a basic supply of high-speed internet, appropriate investment in hardware and perhaps even software, extensive prior knowledge of technical and operational handling, a targeted selection of apps and the pedagogical skills and abilities to use them in the classroom - and worst of all: this list makes no claim to be exhaustive!

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Therefore, in this unit we want to …

- … give a brief overview of items, framework, demands, criteria etc. which need to be considered when planning to use VR in the classroom.

- … raise awareness that before using VR in the classroom, the needs, requirements, attitudes and abilities of different groups of people have to be taken into account.

- … enable education managers, trainers and social workers to consider and all the necessary items, frameworks and criteria before starting to use VR in the classroom.

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Activity 1: In-depth analysis of recommendations given in the E-Compendium and relevant to be considered before introducing VR apps in WBL with SEN students and linking with own requirements and needs in VR teaching (120 min)

- Below you find 10 short recommendations which we suggest to consider when using VR for the frameworks of the VETREALITY project.

- See the detailed recommendations in the E-Compendium (p23ff) and assess for yourself whether or not these recommendations are relevant to you, to what extent they meet these requirements or what still needs to be done (use format the right side).

- Discuss this in the groups and make deductions for your own lesson planning.

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Activity 1:

- **Method:** Group work

- **Materials:** handouts or ppp/beamer + E-Compendium

- **Duration:** 2h (flexible)

- **Special consideration:** a tutor experienced in VR training would be helpful for steering discussions and providing helpful input

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Recommendation 1:

Raise awareness and increase motivation: Your idea of setting up a VR course for SEN students may be new or unfamiliar to many; it is also likely that many do not even know what VR is and how it can be used for WBL and SEN students. At the same time, you might need a lot of support - both in terms of purchasing hardware and software and in terms of participating in the training.

More information: E-Compendium, p23

- Start with convincing people that using VR makes sense and is for their personal mid-/long-term advantage (even if they have to invest time, money and energy in the beginning!)

- Right from the beginning, define exactly what is not the aim of the training - VR is so big and diverse, it's easy to get lost and end up learning nothing at all!

- Differentiate at this issue when addressing different target groups and stakeholders - they all have different basic motives, needs, concerns etc.!!!

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Recommendation 1:

Raise awareness and increase motivation: Your idea of setting up a VR course for SEN students may be new or unfamiliar to many; it is also likely that many do not even know what VR is and how it can be used for WBL and SEN students. At the same time, you might need a lot of support - both in terms of purchasing hardware and software and in terms of participating in the training.

How does this recommendation apply to my situation?	
○ Completely fulfilled	
○ still work to be done (please continue with questions below):	
What is needed to fulfil this recommendation?	
What financial resources are needed for this?	
How much time is needed for this?	
Anything else needed or being considered?	

To what extent do you estimate that you will ultimately be able to fulfil this recommendation?

○ **Completely**   ○ mostly   ○ fairly   ○ poorly   ○ not at all

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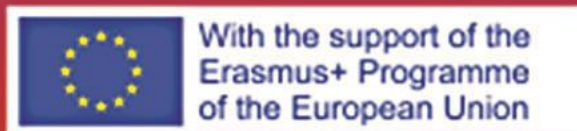
Recommendation 2:

Provision of appropriate equipment: Working with VR requires investment in hardware and software at the beginning. Not everybody likes this fact! But it also offers the chance of a high - even monetary - return on investment. Try to present the ROI comprehensively and in a way that is appropriate for the interests of different donors. This will make your fundraising activities - both internal and external - more successful.

How does this recommendation apply to my situation?

○ Completely fulfilled

○ still work to be done (please continue with questions below):

What is needed to fulfil this recommendation?	
What financial resources are needed for this?	
How much time is needed for this?	
Anything else needed or being considered?	

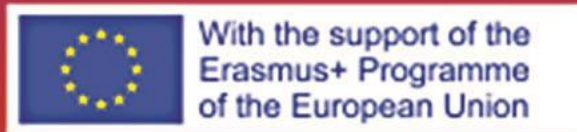**To what extent do you estimate that you will ultimately be able to fulfil this recommendation?**

○ Completely   ○ mostly   ○ fairly   ○ poorly   ○ not at all

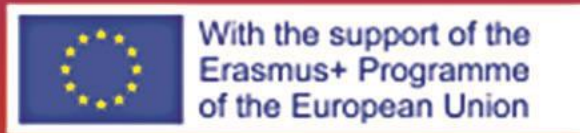Module 4: Unit 1 – When to use VR – and when not

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Recommendation 3:

The hard ware: In the meantime, good equipment is available at reasonable prices. It is not wise to try to save money at this point! There is nothing more annoying and demotivating than working with old, bad and too little VR equipment! You will always regret that!

How does this recommendation apply to my situation?

○ Completely fulfilled

○ still work to be done (please continue with questions below):

What is needed to fulfil this recommendation?	
What financial resources are needed for this?	
How much time is needed for this?	
Anything else needed or being considered?	

To what extent do you estimate that you will ultimately be able to fulfil this recommendation?

○ Completely   ○ mostly   ○ fairly   ○ poorly   ○ not at all

Module 4: Unit 1 – When to use VR – and when not

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Recommendation 4:

The health issue: The health and well-being of learners should always be a top priority - this is especially true when using VR goggles.

How does this recommendation apply to my situation?

○ Completely fulfilled

○ still work to be done (please continue with questions below):

What is needed to fulfil this recommendation?	
What financial resources are needed for this?	
How much time is needed for this?	
Anything else needed or being considered?	

To what extent do you estimate that you will ultimately be able to fulfil this recommendation?

○ **Completely**   ○ **mostly**   ○ **fairly**   ○ **poorly**   ○ **not at all**

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Recommendation 5:

The VET trainers: Be aware that the trainers are – as often – the key figure in the whole undertaking – especially, if it is the first time you apply VR in your training programmes. Chose these key persons very carefully – they will determine success or failure!

How does this recommendation apply to my situation?

○ **Completely fulfilled**

○ **still work to be done (please continue with questions below):**

What is needed to fulfil this recommendation?	
What financial resources are needed for this?	
How much time is needed for this?	
Anything else needed or being considered?	

To what extent do you estimate that you will ultimately be able to fulfil this recommendation?

○ **Completely**   ○ **mostly**   ○ **fairly**   ○ **poorly**   ○ **not at all**

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Recommendation 6:

Be prepared: Most of the time you will have to start from scratch in your awareness raising activities or in your training because there is little previous knowledge! And don't rely on the basic attractiveness of VR - this will soon fade away and everything will depend on how well you are prepared and how good your training programme is!

How does this recommendation apply to my situation?

○ Completely fulfilled

○ still work to be done (please continue with questions below):

What is needed to fulfil this recommendation?	
What financial resources are needed for this?	
How much time is needed for this?	
Anything else needed or being considered?	

To what extent do you estimate that you will ultimately be able to fulfil this recommendation?

○ Completely   ○ mostly   ○ fairly   ○ poorly   ○ not at all

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Recommendation 7:

Working with SEN students: VR learning requires certain intellectual, psychological, motor, sensory and other prerequisites - the more limitations there are here, the more challenging its application. Does this argue against inclusive education - of course not!

How does this recommendation apply to my situation?

○ Completely fulfilled

○ still work to be done (please continue with questions below):

What is needed to fulfil this recommendation?	
What financial resources are needed for this?	
How much time is needed for this?	
Anything else needed or being considered?	

To what extent do you estimate that you will ultimately be able to fulfil this recommendation?

○ Completely   ○ mostly   ○ fairly   ○ poorly   ○ not at all

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Recommendation 8:

Small is beautiful: Whether you work with SEN students or not - VR is currently not very suitable for working with large groups (especially not at the beginning). Technical problems, boredom and passive time quickly demotivate and destroy the lessons!

How does this recommendation apply to my situation?

○ Completely fulfilled

○ still work to be done (please continue with questions below):

What is needed to fulfil this recommendation?	
What financial resources are needed for this?	
How much time is needed for this?	
Anything else needed or being considered?	

To what extent do you estimate that you will ultimately be able to fulfil this recommendation?

○ Completely   ○ mostly   ○ fairly   ○ poorly   ○ not at all

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Recommendation 9:

WBL issues: There are more and more apps aimed at VET/WBL, but it is not always the case that their quality or content is sufficient for your group's learning objectives - very often it takes creativity and extensive pedagogical skills to make apps usable for VET/WBL! Again, a task that trainers have to solve on their own initiative!

How does this recommendation apply to my situation?

○ **Completely fulfilled**

○ **still work to be done (please continue with questions below):**

What is needed to fulfil this recommendation?	
What financial resources are needed for this?	
How much time is needed for this?	
Anything else needed or being considered?	

To what extent do you estimate that you will ultimately be able to fulfil this recommendation?

○ **Completely**   ○ **mostly**   ○ **fairly**   ○ **poorly**   ○ **not at all**

Module 4: Unit 1 – When to use VR – and when not

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Recommendation 10:

Mobility issues: VR seems perfect for acquiring mobility skills at first glance - but watch out, it could also be a "false friend". Seeing virtual places alone is not learning!

How does this recommendation apply to my situation?

O Completely fulfilled

O still work to be done (please continue with questions below):

What is needed to fulfil this recommendation?	
What financial resources are needed for this?	
How much time is needed for this?	
Anything else needed or being considered?	

To what extent do you estimate that you will ultimately be able to fulfil this recommendation?

O **Completely**   O **mostly**   O **fairly**   O **poorly**   O **not at all**

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Recommendation 11+:

[if there are other recommendations you consider as relevant, please feel free to add them – copy/paste this slide as often as needed!]

How does this recommendation apply to my situation?

○ **Completely fulfilled**

○ **still work to be done (please continue with questions below):**

What is needed to fulfil this recommendation?	
What financial resources are needed for this?	
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To what extent do you estimate that you will ultimately be able to fulfil this recommendation?

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Activity 2: Mind-mapping

- We have attempted to create a mind map of important areas to consider when planning VR lessons. The overview does not claim to be absolutely correct or complete ... but please take a close look at it and discuss it in the group.

- Have we considered everything? Is there anything missing? Or is it better not to think about it so much? What can you deduce for your lesson planning?

- If it is important to you, you can also create your own mind map (for this it is handy to use one of the many free online applications).

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Activity 2:

- **Method:** Group work

- **Materials:** handouts or ppp/beamer, online [mind map tool](#)

- **Duration:** 1h

- **Special consideration:** a tutor experienced in VR training would be helpful for steering discussions and providing helpful input

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Criteria to be considered before using VR in the classroom (selection)

Legal dimension
- does curriculum foresee/allow VR?
- do students need permission to use VR?

technical issues
- hardware
  - decision on VR system
    - market position/expertise of the provider
    - PC-connected vs stand-alone devices
    - Degrees of Freedom - 3 vs 6 DoF
  - costs
  - number of devices needed
- infrastructure
  - high speed-internet
  - internet connections in the classroom
  - architecture/structure of the classroom

learning materials (apps)
- compatibility with hardware
- costs (if any)
- availability
- usability
  - language versions
  - graphic design
  - navigation and operation
- job reference (special focus on WBL)
  - updatability of the contents

content and pedagogic issues
- apps available for WBL area
- combinability with other learning units
- advantages/disadvantages compared to other methods/instruments
- duration of VR session
- number of students per session
- general acceptance of the method

awareness and motivation of parties involved
- education policy stakeholders
- education institute management
- trainers
- students
  - (parents)
- business representatives

health issues
- weight of equipment
- mental and psychological coniderations
- disabilty restrictions of SEN students (if any)
- risks of injury

knowledge, skills and competences of all parties
- trainers
  - advanced IT literacy
  - VR-pedagogy (general and SEN-oriented)
  - knowledge and comptence in applying apps
- students
  - basic IT literacy
- IT staff/support
  - profesional IT literacy
  - expertise in VR technology
  - availability during classes

special focus: mobility
- identification of knowledge, skills and competences needed to be trained
- different apps might be needed (transversion skills)

END OF UNIT -

THANK YOU VERY MUCH FOR YOUR ATTENTION!

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