EXAMPLE LESSON

First Steps: We discover virtual worlds

For teachers at secondary levels I and II using VR in the classroom for the first time. 10 to 15 pupils, two 50-minute units, Oculus Quest 2, 3 or 3S with the pre-installed apps “First Steps” and YouTube. No prior knowledge required from students; the teacher should test the implementation in advance.

TARGET GROUP
Secondary I and II, 10 to 15 pupils

DURATION
2 × 50 minutes

EQUIPMENT
Quest 2 / 3 / 3S, tablets, handouts

THINGS TO DO BEFORE THE LESSON STARTS

- Check that all devices are charged and that the controllers are connected to the individual VR headsets.
- Check that the batteries in the controllers are charged.
- Check that the room boundaries for the room where the unit is being conducted are adjusted.
- Be open and allow for challenges, curiosity, mistakes and spontaneity.

1 Introduction to the lesson

OBJECTIVES
Students develop their interest and curiosity about VR and activate their prior knowledge.

METHOD(S)
Brainstorming

MEDIA
Video

TEACHER’S PERSPECTIVE
The teacher shows a short video on virtual reality, moderates a brainstorming session in the plenary and collects the students’ associations and previous experiences on the topic.

LEARNERS’ PERSPECTIVE
The students watch a short video on virtual reality, then contribute their own thoughts, experiences and questions in a brainstorming session and actively participate in the plenary discussion.

2 The development phase

OBJECTIVES
Students develop knowledge about areas of application for VR, technical components and safety regulations.

METHOD(S)
Station operation and role play

MEDIA
VR glasses, video, tablets, handouts

TEACHER'S PERSPECTIVE
The teacher prepares the station operation, provides the materials and explains the process. They accompany the process, answer questions, provide input and assist with the VR glasses and content. They then lead the role play, structure the distribution of roles and ensure that safety regulations and technical aspects are actively applied and reflected upon.

LEARNERS' PERSPECTIVE
The students go through several stations where they learn about the areas of application of VR, technical components and safety regulations. They work with VR glasses, watch a video, use tablets for research and work on handouts. They then take on different roles in the role play and apply their knowledge.

3 Consolidating the results

OBJECTIVES
Students consolidate their knowledge of the areas of application of VR, the technical components and the safety regulations and apply it in practice.

METHOD(S)
Simulation

MEDIA
VR glasses, tablets

TEACHER'S PERSPECTIVE
The teacher prepares a simulation to consolidate the students' knowledge, which the students then apply in practice. During the simulation, the teacher observes behaviour, provides assistance if necessary and ensures that what has been learned is applied in a targeted manner.

LEARNERS' PERSPECTIVE
The students take part in a simulation in which they apply their knowledge of VR applications, technical components and safety regulations. They work with VR glasses and tablets, solve practical tasks and apply what they have learned.

4 Conclusion

OBJECTIVES
Students reflect on what they have learned and their practical experience with the VR glasses.

METHOD(S)
Reflection round

MEDIA
None

TEACHER'S PERSPECTIVE
The teacher leads a structured reflection session, asks specific questions, moderates the discussion and ensures that different perspectives are brought to the table, helping students identify key insights and reflect on challenges.

LEARNERS' PERSPECTIVE
The students describe their experiences using the VR glasses, explain what they found exciting or new and where they encountered challenges, listen to each other and compare their perspectives.

THINGS TO DO AFTER THE LESSON

- Switch off all devices.
- Connect devices to charging stations and check the batteries in the controllers.
- Reset room boundaries if the devices are also used in other rooms.
- Collect feedback from learners.
- Record a brief reflection on the implementation.

Contents

- Introduction: What is VR? (Definition, examples from everyday life, advantages and challenges)
- Hardware basics: Structure and functionality of VR glasses
- Safety: Hygiene, movement space, avoiding dizziness
- Practical example with VR glasses: 'First Steps' and 360° VR video (youtube.com/watch?v=7AkbUfZjS5k)

Skills acquired

Students can:

- name examples of individual applications.
- describe how VR headsets work and their benefits.
- explain and apply safety regulations.
- use VR headsets for the assigned task.

Learning outcomes

- a) Students can name various areas of application for VR in education, work and entertainment and describe examples.
- b) Students can explain the basic functioning of VR headsets, including technical components such as motion sensors, screens and software.
- c) Students can apply and justify the most important safety regulations when using VR headsets.
- d) Students can use VR headsets in a targeted manner for specific tasks.

Mapping to models

TPACK

- a) Content knowledge
- b) Technological knowledge
- c) Technological knowledge
- d) Content knowledge

CAMIL

- a) Interest
- b) Cognitive load
- c) Self-regulation
- d) Self-efficacy

DigComp

- a) Information and data literacy
- b) Problem-solving skills
- c) Security
- d) Communication and collaboration
- e) Problem-solving skills

Methodological considerations

The *brainstorming* method is suitable for achieving learning outcome (a), as it enables an open approach to the topic.

The *station operation* method is suitable for outcome (b), as it promotes individualisation and independence.

The *role-playing* method is suitable for outcome (c), as it enables an experience-oriented approach.

The *simulation* method is suitable for outcome (d), as it enables the targeted testing of new possibilities in a safe and practical context.

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