Tutorial
Development of scenarios for Virtual Reality applications for Vocational Education and career guidance

Bildungszentren des Baugewerbes

VR4VET
Co-funded by the Erasmus+ Programme of the European Union

Identify working groups

- Group participants according to their field of work
- Knowledge Level: Beginners, Intermediate, or Experts
- Define goal of the tutorial: What should our groups be able to do after the tutorial?

Empathize

- Who is the target group of our scenario?
- Excerpt from our Methodology: “In Empathize, the objective is to understand the problem, the users and their needs, and challenges. Therefore, this phase is largely characterized by engaging in user-centered research and conducting interviews, observations, and surveys with the target audience to gain insights and develop empathy for the users, to gather information that will inform the design process.”


Define

Define

- Synthesized the findings to define a clear problem statement, requirements, and challenges to guide the design process.

Define

Challenges identified in the VR4VET project according to our Methodology:

- Challenges of completing the internship period, job interview and dealing with situations that may arise daily in the workplace
- Existing job descriptions are often text-heavy and gave little insight into the profession itself

The most requested features in the applications were:

- Job interview simulation
- Visualization of actual jobs
- users wanted to be able to link the information about the professions to the actual jobs (transfer of learning), tasks and skills required. The young job seekers wanted to get feedback on their actions to build trust and a sense of mastery.

Define

Challenges identified in the VR4VET project according to our Methodology:

- Challenges of completing the internship period
- Job interview
- Dealing with situations that may arise daily in the workplace
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Define

Based on the data synthesized from users' needs, we defined the four main components of the Virtual Job Taste Methodology:

- Complex Tasks: specific description of the activities that entails working in at the job
- Feedback: Instructions and assistance provided during the job to the intern/young worker
- Key skills: Specific skills required to be successful and attain mastery in that job
- Progression system: indication of their performance at the job

Ideate

- In the ideation phase, we brainstormed ideas and potential solutions to the problem with the requirements set in the define phase.

Ideate

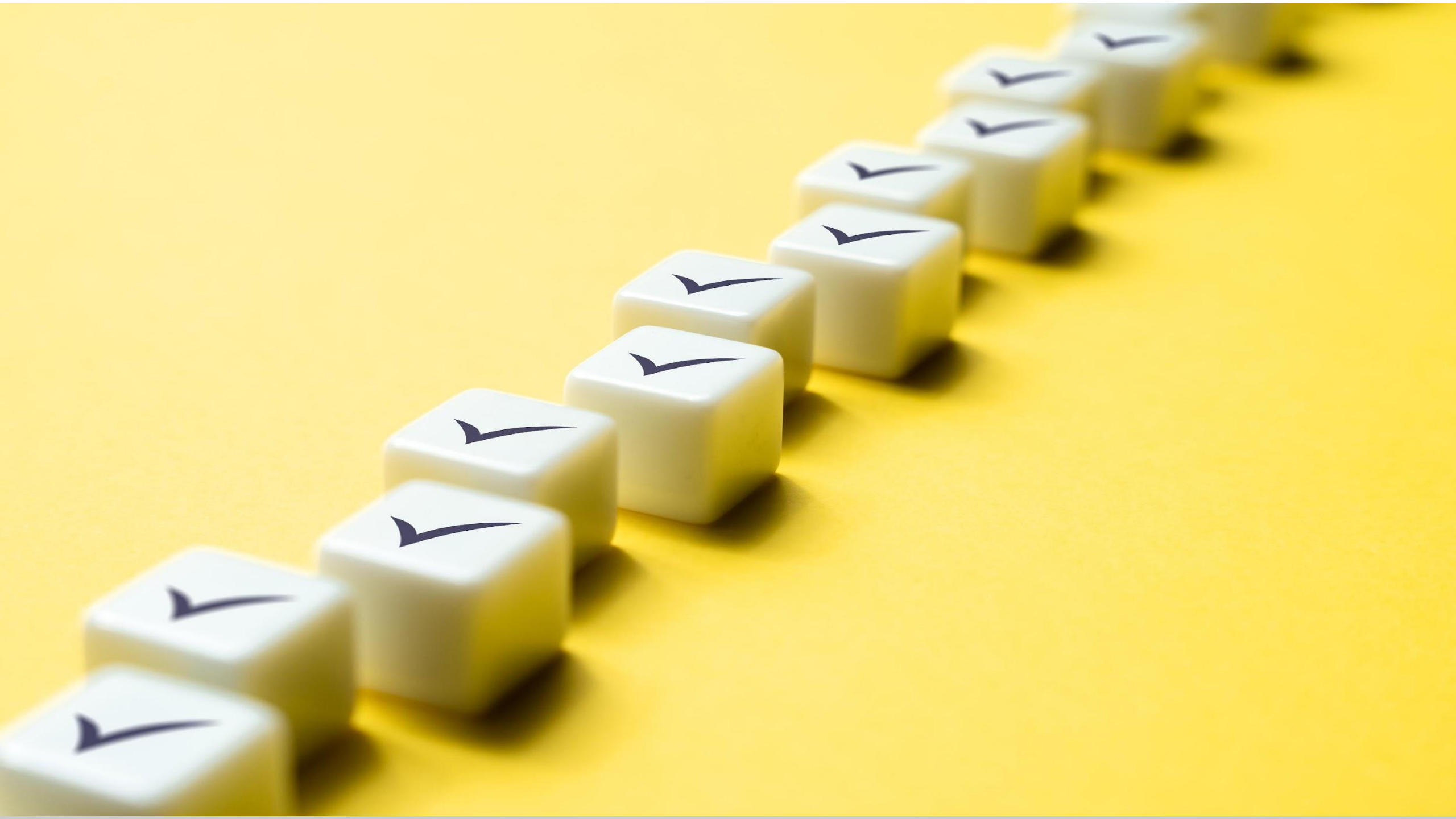
- “How might we”
- How might we create more insight and help selecting internships using VR?
- How might we improve self confidence among youth with a VR application?


topic
topic
topic

Defining the topic and scope

- Core content: Which specific topic will be covered?
- Location: Describe the workplace - the location of the scenario
- Scope: What are the key typical workplace tasks for the scenario?

- Level of detail: How much detail is enough to make the VR experience realistic?
- Level of abstraction: How much detail can be skipped to still have the VR experience realistic.



Steps of complex learning based on Kirschner & Norman

1. Defining subtasks
    a. Break down the complex task into subtasks
2. Develop assessment instruments
    a. Set performance objectives for each subtask.
    b. Define the conditions for a successful or unsuccessful completion of the subtask.
    c. Define which skills are required for and are developed by performing each subtask.

Steps of complex learning

3. Sequence the subtasks
   a. Arrange the subtasks according to the increasing dependency (what needs to be done first) to determine the sequence (can have multiple paths with the same start and end).
   b. Rate each task according to its complexity and arrange them according to the increasing complexity where it is possible (where it does not interfere with the subtasks are done in reality).

Steps of complex learning

Supportive information deals with cognitive aspects, problem solving and reasoning. Supportive information should connect the subtask to the whole “complex” task helping users to understand the bigger picture.

4. Design supportive information
    a. Supportive information for subtasks can include information such as why the subtask is relevant, what are things to look out for, and similar.
    b. Not all subtasks need to have a supportive information. Supportive information should be faded out in the next repetition of the subtask.

Steps of complex learning

Procedural information deal with steps of subtasks

5. Design procedural information
    a. These are instructions that the learners need "just-in-time", right before executing a specific step of the subtasks, so that the learners can execute this step. Such information can be given in a form of feedback when a step is not performed correctly and needs to be repeated.

Steps of complex learning

Part task practice deals with providing opportunity to repeatedly practice a task or a step to develop automaticity.

6. Design part task practice:
    a. Repetitive steps should be identified. It should be possible for the user to repeat (practice) such a step if he/she wishes or until a satisfactory performance level is met.

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Thank you for your attention!




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