How can generative AI be used for interactive simulations?

- VU AI in Education Show & Share
- 5 December 2024

Program

1. Good practice and demo Remco Jonkind
2. Good practice and demo Esther Schagen/Wybren Bosma
3. Discussion and Validation
4. How does genAI powered interaction fit in your education?

Speakers

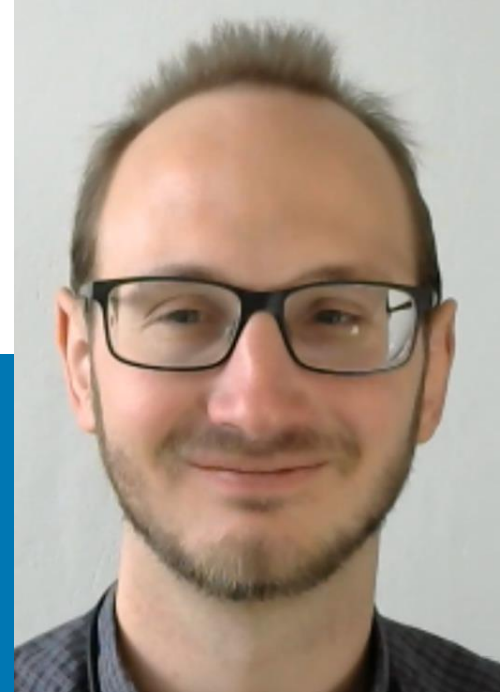Remco Jonkind
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Remco Jonkind

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Goal of this session

Today we would like to:

1. Discuss with you the **importance** and **challenges** of teaching **collaboration skills** in higher education
2. Experience together with you how **practicing communication skills** with **a genAI driven avatar** can support the collaboration process

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1. Importance and challenges of teaching collaboration skills in higher education

Comprehensive and **transverse integration** of training on effective collaboration and communication into the curriculum is necessary (González-Salamanca et al., 2020)

Developing these skills requires **practice**, **reflection** on **personal experiences**, and **effective instruction** with opportunities for **feedback** (González-Salamanca et al., 2020)

Research has shown that **group learning activities**, characterized by collaborative projects extending beyond a single lesson, **positively contribute to collaborative skill development** (De Hei et al., 2018)

To successfully support collaborative skill development, emphasis should be placed on the collaborative learning process, **guided by teachers who facilitate meaningful interactions** in a safe, inclusive learning environment (De Hei et al., 2020)

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Communication & Collaboration
BA Communication Science

Bachelor Communication Science: 50% of the assignments are team-assignments (30% weight)

Collaboration toolkit – set of questions (https://vu.nl/en/student/study-skills/self-help-kit-group-work)

Team collaboration contract

Workgroups about peer feedback, group dynamics, self-disclosure, reflection etc.

But….

while students acknowledge the importance of collaboration, they struggle to take ownership of the collaborative process and to deal with team issues or conflicts.

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How to solve this issue?

Teaching our students how to give peer feedback on behaviour

(O'Neill et al., 2019; Van Rompay-Bartels & Geessink, 2023)

But....

- **Addressing behaviour** requires more practice and personal insights than are currently supported in our program.
- This is especially important in the **international classroom**, in which cultural differences complicate interaction and collaboration (De Hei et al., 2020)
- However, this is **time-consuming**, and our teachers feel **under-equipped** to fulfill this role.

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The answer can be in technology
- The use of digital tools in education has proven to be effective in the development of skills
- Rise of AI can create greater learning experience → customization and personalization in learning, tailored to the individual student
- Simulated skill-practice has been demonstrated to enhance quality of performance in real-life situations
- New developments in genAI pave the way for more complex and personalized interaction training

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genAI powered avatar training

- We asked students about difficult situations in teamwork
- We have done focus-groups with students about collaboration and communication in teams
- We will integrate practicing with the avatar in a more defined learning path on (intercultural) collaboration and communication in the project courses

Today we would like to:

1. Discuss with you the **importance** and **challenges** of teaching **collaboration skills** in higher education

2. Experience together with you how **practicing communication skills** with **a genAI driven avatar** can support the collaboration process

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genAI powered avatar training

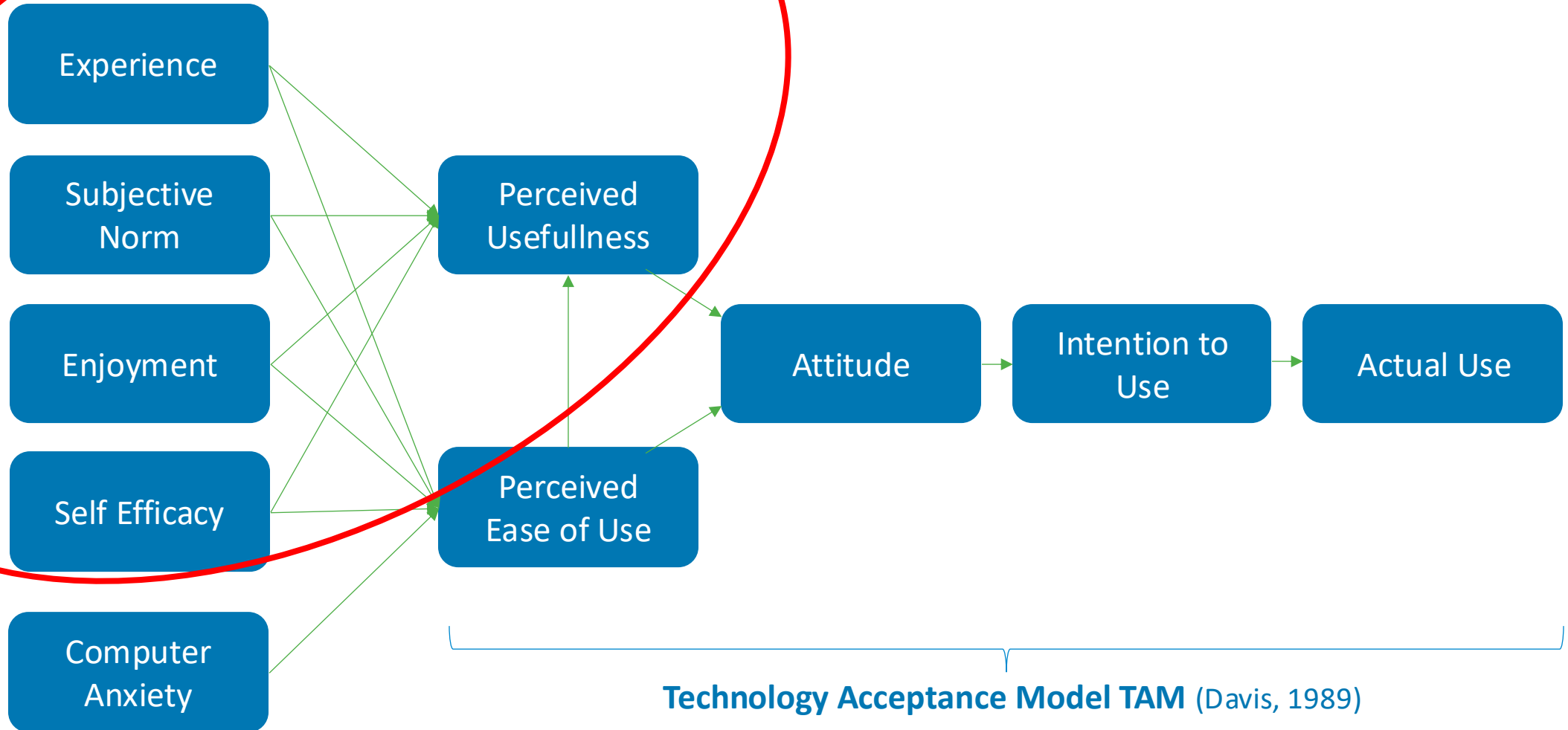English

Dutch

Hey, how are you. Good to see you again.

Experience and Discussion

First impressions?
Questions?

Now let's see what implementing an AI powered interaction requires…..

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Theoretical Break

Experience

Subjective Norm

Enjoyment

Self Efficacy

Computer Anxiety

Perceived Usefullness

Perceived Ease of Use

Attitude

Intention to Use

Actual Use

Technology Acceptance Model TAM (Davis, 1989)

General Extended Technology Acceptance Model for E-Learning GETAMEL (Abdullah & Ward, 2016)

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Case: introducing the avatar

We assume that by initiating the acceptance process offline:

1. We will be able to influence the **subjective norm** (by using the social space and the physical learning environment)
2. We will be able to enhance the perception of **self-efficacy**
3. We will make a start with **experiencing** the tool

This will lead to:
- higher acceptance of the use of the tool (higher perceived usefullness and perceived ease of use)
- a higher involvement in and development of giving and receiving peer-feedback

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Thank you for your attention.
Questions?