

TECHNOLOGY IN EDUCATION

# *Classroom simulations*

TO TEACH CLASSROOM MANAGEMENT

DR. HANNEKE THEELEN



# *Topic Outline*



**1**

**THE RISE OF TECHNOLOGY**

**2**

**CLASSROOM MANAGEMENT**

**3**

**(CLASSROOM) SIMULATIONS**



# *The rise of Technology in Education*





*The 80s were exciting times!*



I was born



Computers made their appearance in education.

*Radio and video have been used (sparingly) since the 1920s. Mainly for distance learning.*



# *The year 1991 was a milestone*

I was in the second year of kindergarten and met Miss Erna: the perfect teacher!





# *At the same time...*



Internet made its appearance in education.

*In my last year of primary school, for example, I made my first reports on the computer using the internet.*



# *Late 1990s and 2000s*

In the late 1990s and early 2000s, I went to high school. I met many different teachers and wondered: *Why was there such a nice classroom atmosphere with some teachers and chaos with others? Why was one teacher so good at classroom management and the other not? Why wasn't everybody like Miss Erna?*



At the same time, e-learning platforms and Learning Management Systems (LMS) emerged.



# *The rise of mobile technology in the 2000s*

I was still intrigued by teachers and decided to become one myself. Could I be the “new” miss Erna? I went to teacher education and then studied educational sciences (online ;-)).



Mobile technology (phones, tablets) made its appearance in education.

# *2016: VR made its appearance*



I had a question (and dream): Can we develop pre-service teachers' **classroom management** in a real-life environment using technology?

The oculus rift came out as the 1st consumer glasses.







# Classroom management





# *An example...*



# *What is it and why is it so difficult?*

Imagine standing in front of a classroom with approximately 25 to 30 adolescents. Some students are chatting with each other, some students are unmotivated to join the lesson, some students are waiting for you to start while other students are walking through the classroom. You have to attract their attention to start your lesson.



*It's also difficult outside the classroom ...*

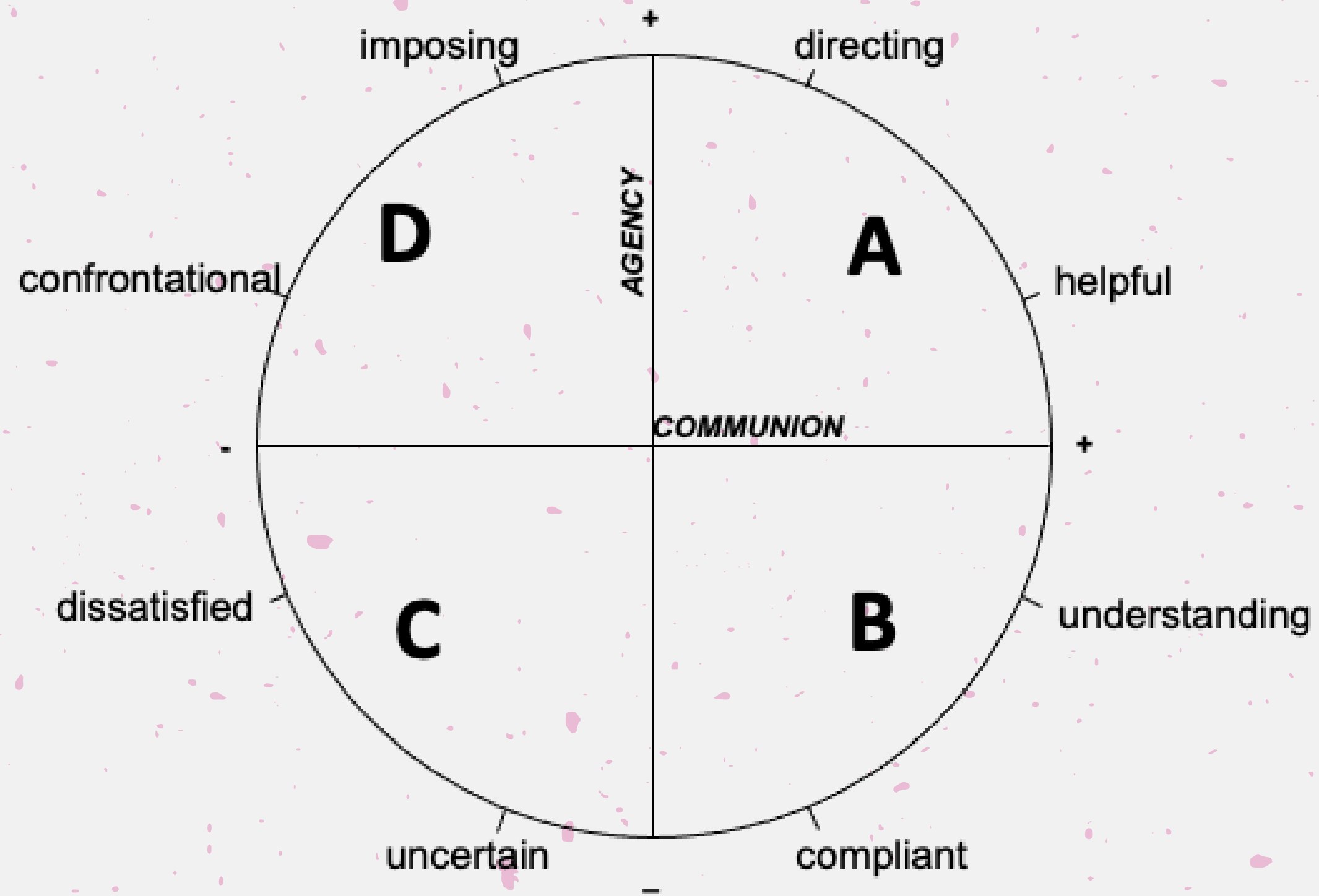




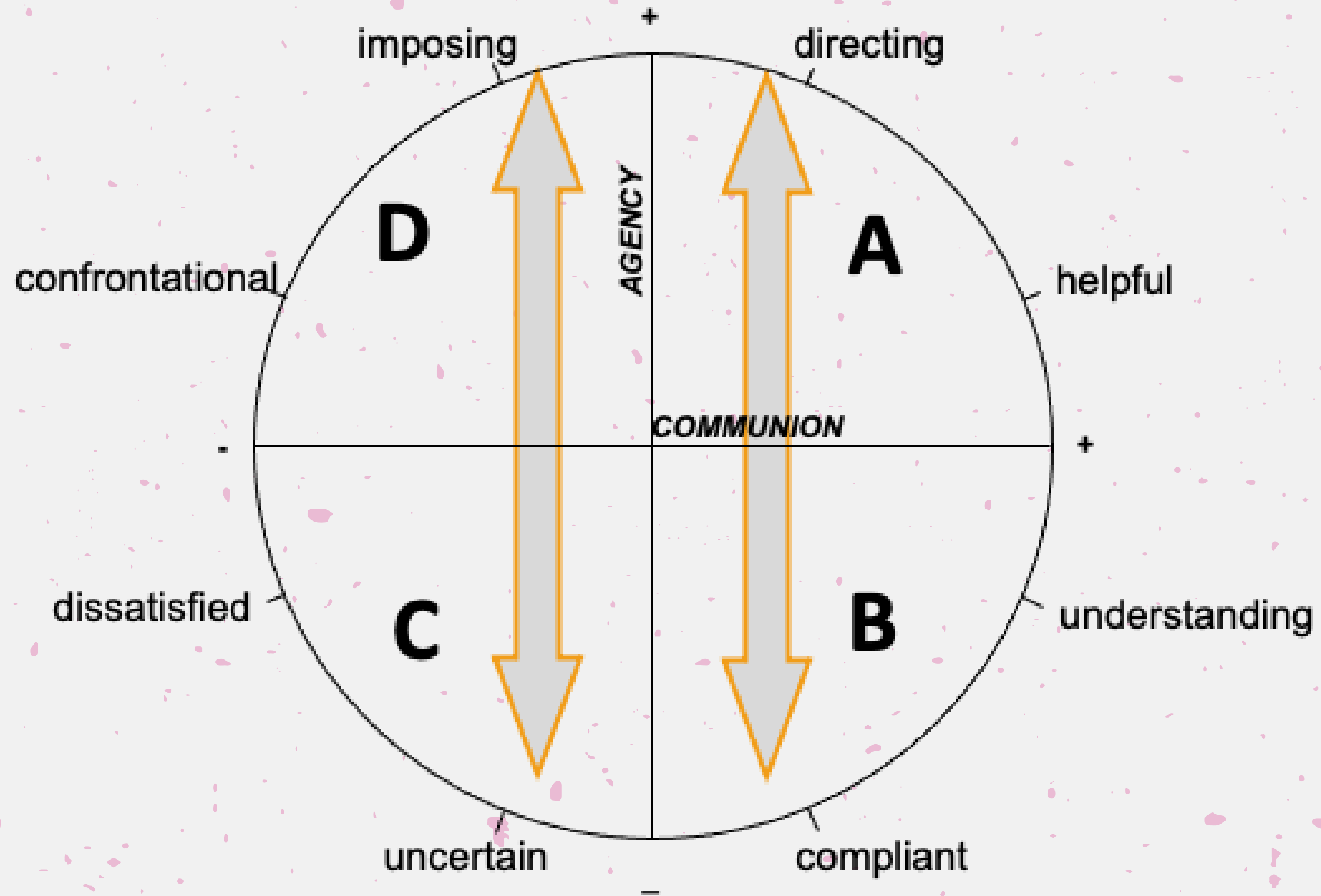
# *Interpersonal perspective*



# *Teacher interpersonal circle*

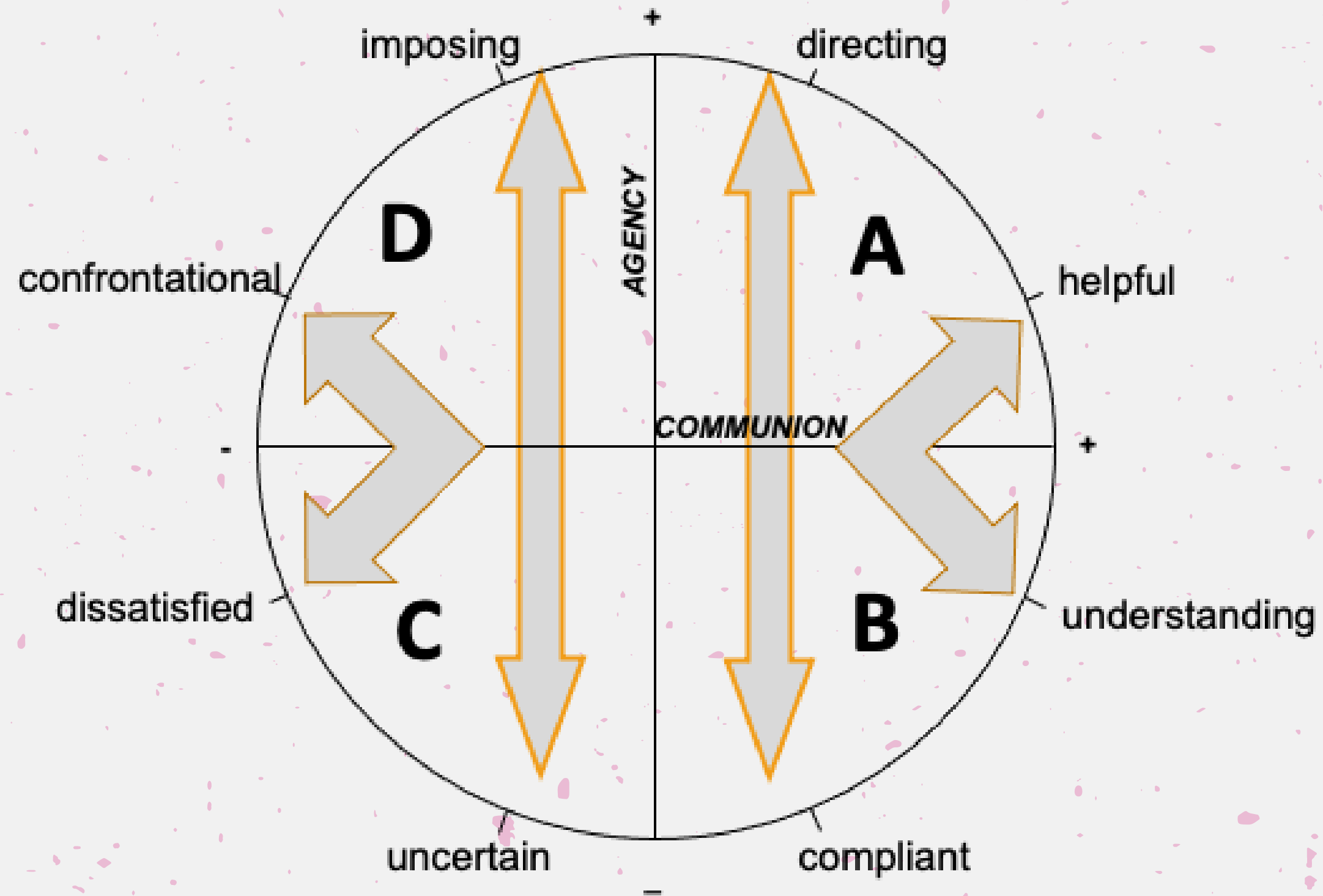


# *Teacher interpersonal circle*

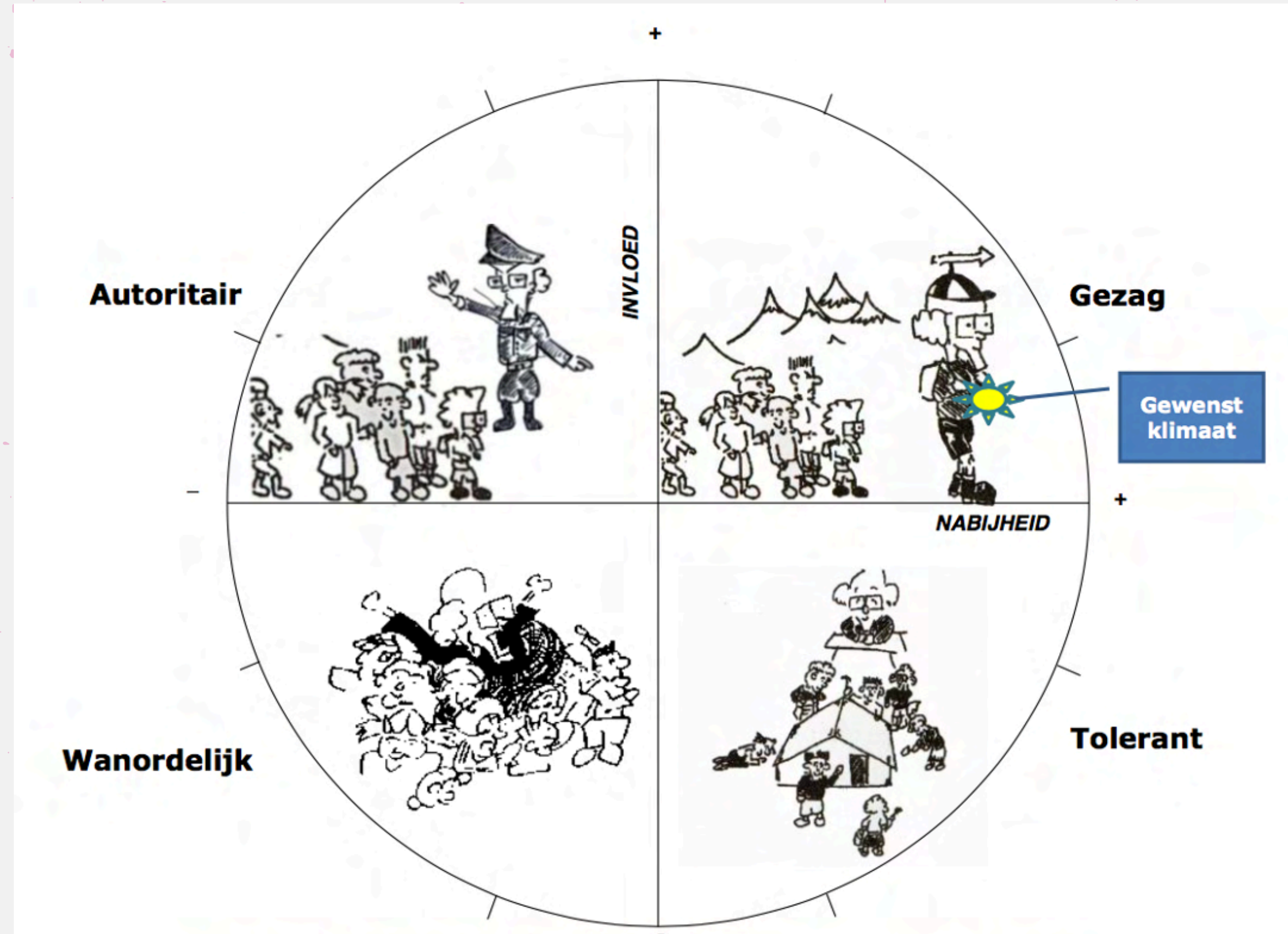




# *Teacher interpersonal circle*



# Teacher interpersonal circle



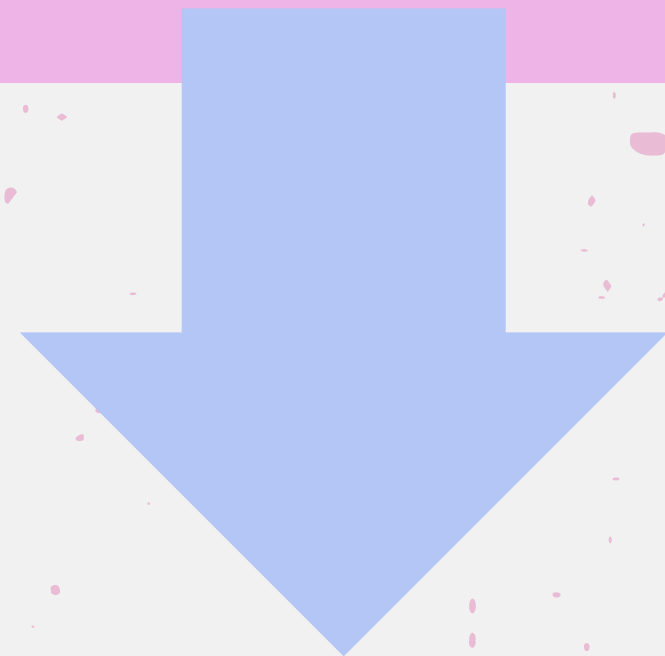
Gewenst klimaat gepositioneerd in de Interpersoonlijke cirkel docent



# *Why is this difficult?*

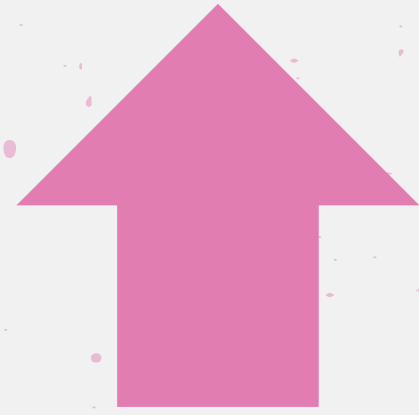
You are just a beginning teacher – still a student yourself at a teacher education institute.

You lack the experience and the tools (yet) to maintain order in the classroom



**anxiety**





*Self-efficacy*





*How?*

**Teach them to be good  
classroom managers like  
Miss Erna.**



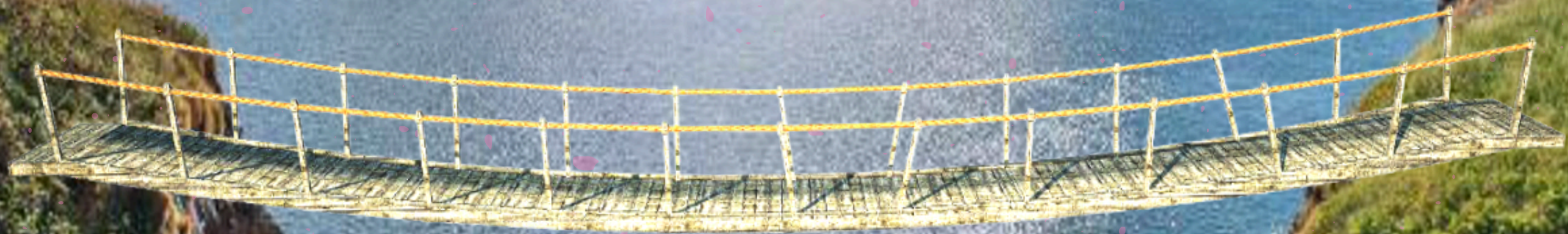




*Teacher education  
institute*

*Internship  
school*





# *Classroom simulations*

*Teacher education  
institute*

*Internship  
school*



# *(Classroom) simulations*



# *(Classroom) simulations*

**Simplified imitations of (classroom) events**

video, animation, text-based role playing, etc.



# *It starts with role play*



Role play simulations can be enhanced with technology in two ways:

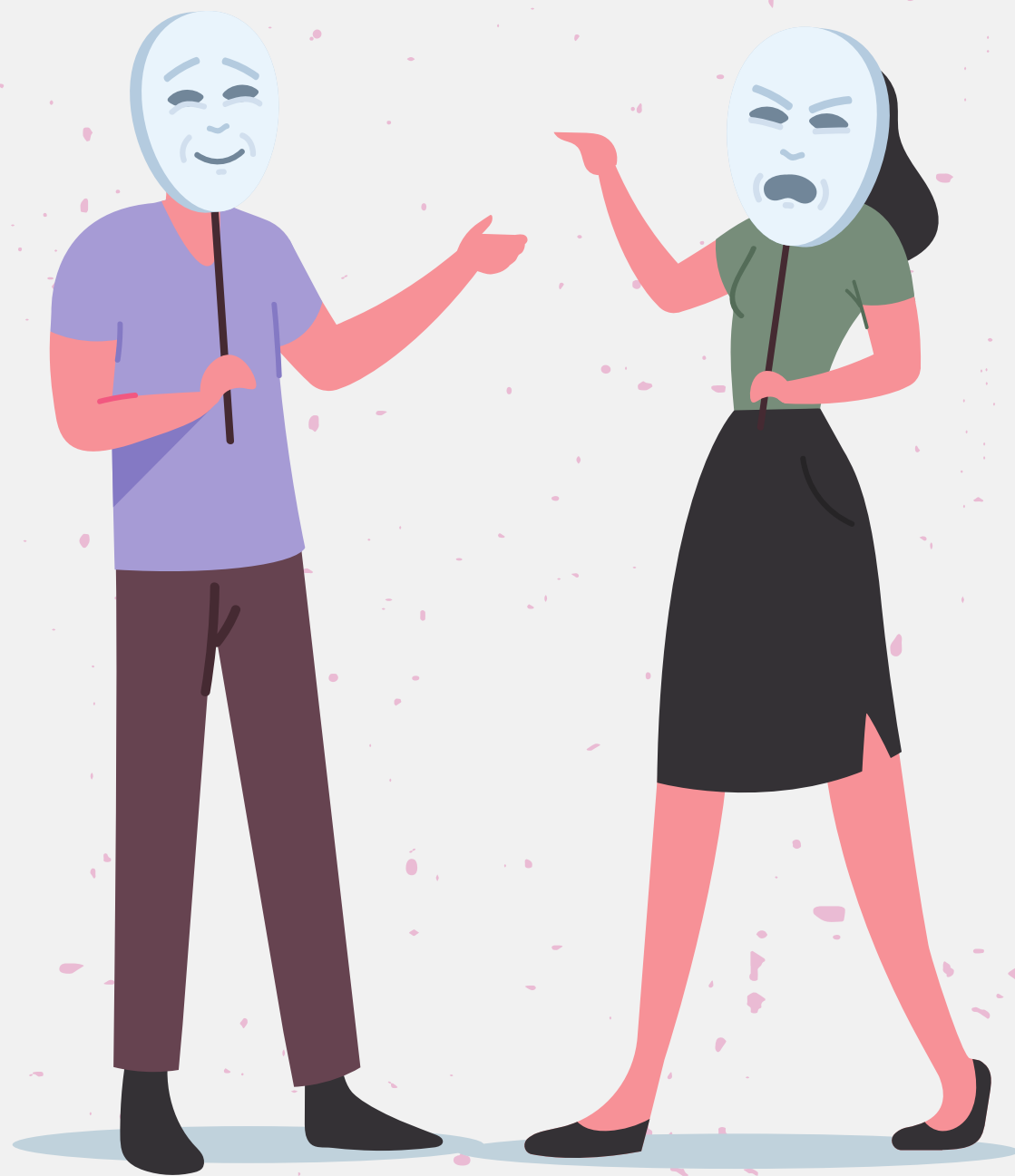
1. **Non-immersive** -> scenarios presented through text and static graphical output (e.g., simschool)



# *simSchool*



# *It starts with role play*



Role play simulations can be enhanced with technology in two ways:

**1. Non-immersive** -> scenarios presented through text and static graphical output (e.g., simschool)

**2. Immersive** -> often use advanced technologies such as VR to create a sense of presence and make learners feel as if they are physically present in a different environment (e.g., BreakingBadBehaviour)

# Breaking Bad Behaviour







Some examples of our  
own research





# *Some quotes from students*

**“I became more conscious about diversity in a classroom and how to handle students with special needs.”**

“It is really nice to work together and discuss about different opinions. This way you can broaden your own vision.”





# *The Virtual Classroom*







# *Some quotes from students*

**“I had never observed experienced teachers before. Especially the group discussions about our observations was instructive.”**

*“Although the VR headset was inconvenient when wearing glasses, the VR headset was a real asset. I looked around a lot more than without the headset.”*





↑ *Self-efficacy*

↓ *Anxiety*

↑ *Competence*



# *VR Epistimy - Midwifery*





# 360 degree video tours FM





# *Why are simulations useful?*



**1**

**MORE REALISTIC IMAGE OF THE ACTUAL PRACTICE**

**2**

**WHAT SITUATIONS CAN YOU EXPECT IN THE ACTUAL PRACTICE?**

**3**

**HOW TO ACT AS A PROFESSIONAL**



# *Implications for practice*

## Implications for practice

Simulations could

- extend experiences
- familiarize students with the actual practice
- smoothen the transition between university and practice



# *The Future?*

**Adapted XR interfaces (PhD research Jos Gelissen)**

Automated responses based on for example non-verbal behaviour, posture, eye-tracking etc.

**Classroom management in higher education**



*Thank you for listening!*

