

Challenges being a teaching assistant and how to deal with them



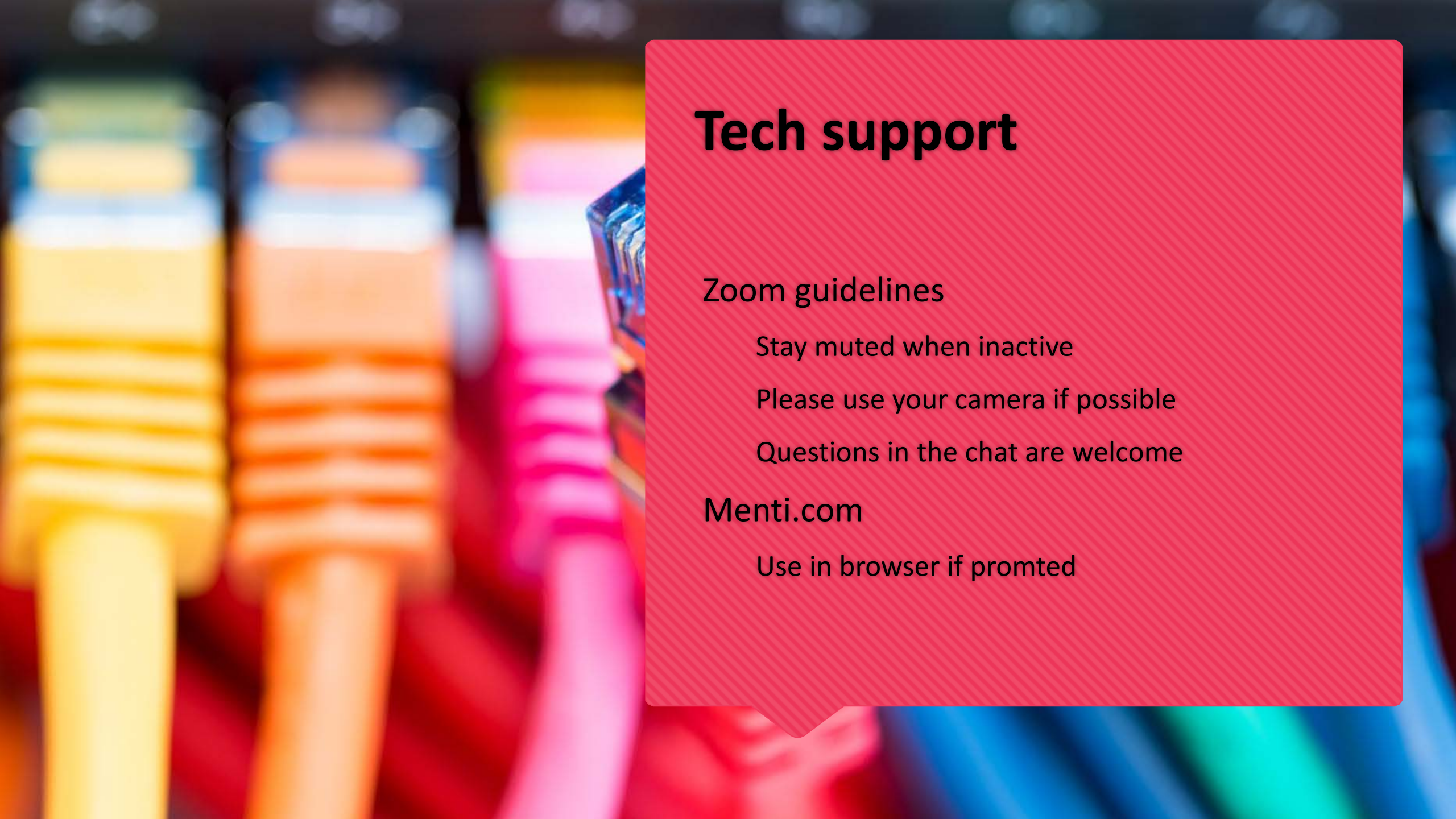
 **NTNU**
Department of Computer Science

by Madeleine Lorås, PhD student at Excited Centre for Excellent IT Education, NTNU

Learning outcome goals

- General knowledge of the main research on TAs
- Knowledge of the main challenges for TAs and tools to limit them
- Experience in reflecting on your own challenges and a plan of how to deal with them





Tech support

Zoom guidelines

Stay muted when inactive

Please use your camera if possible

Questions in the chat are welcome

Menti.com

Use in browser if prompted

About me



Catch IDI 2020. Photo: Kai T. Dragland, NTNU

- PhD in computing didactics at
- Trained teacher in computing and mathematics
- Research on first year computing students and how they study and learn
- Teaching duties in introductory programming courses and training teaching assistants
- I really like to bake!

About you

What do you teach?

What experience do you have teaching?

Summarize your view on teaching in one word?

Definitions and context

What is a teaching assistant:

A student who is employed to assist the teaching and learning activities

Why teaching assistants:

Increasing student numbers, cheaper workforce and pedagogical benefits are among the main reasons.

Activities:

Weekly assignments
(øvinger)

Open
labs

Projects

TA tasks:

Pass/fail

Help

Lecture

Facilitate

Review

Customer

PhD TA:

Can do formal grading

More responsibility

Lecturing

Employee access

Research on TAs



Contributes to student success

(DeChenne et. al, 2015)

Often seen as main teacher, and the person they interact with the most

(Riese & Kann, 2020)

Being a student makes them more approachable

(Decker et. al, 2006; Ren et. al, 2019)

Closer to the students' understanding

(Ren et. al, 2019)



TAs view students as friends,
challenging during assessment

(Riese & Kann, 2020)

Lack training in pedagogy and
assessment

(Riese, 2018; Muzaka, 2009; DeChenne et. al, 2015)

TA challenges across Europe

A multi-national study to be
published at the Innovation and
Technology in Computer Science
Education in June 2021

RQ1

Which **challenges** do TAs in
computer science face?

RQ2

Are the identified challenges
similar or different across
institutions and countries?



NTNU

Kunnskap for en bedre verden



Data: Reflection essays

“Describe **an interesting situation or interaction** you have experienced as an assistant. It can be something you found challenging, an ethical dilemma, or just something that has been on your mind. **Reflect on how you handled the situation.** What did you do well? What would you have done differently? Is there something you would like feedback on or questions you have?”

180 essays in total, collected from 2017-2020

Student focused challenges

Students with individual struggles

Students with different content knowledge

Students with an emotional presence

Students with different mindsets and abilities

Relationships to students

“It is not always so easy to grade their [close friends’] papers and I feel a conflict of interest while doing so. [...] It does not always feel fair that I spend so much time guiding my friends and not the rest of the students. It seems that the threshold for asking a friend through a FB-message is much lower than sending an email to an unknown teaching assistant.”

[TA 48, NTNU]

“I have a tendency to take over the students’ keyboard when I feel the time pressure. One should always take the time to make sure the student has understood the problem you have been helping them with and adding some constructive feedback.”

[TA 6, NTNU]

“In stressful situations, it can be easy to forget to take it slow to make sure the student understands fully what you are trying to help with. “

[TA 6, NTNU]

Threats to best practice

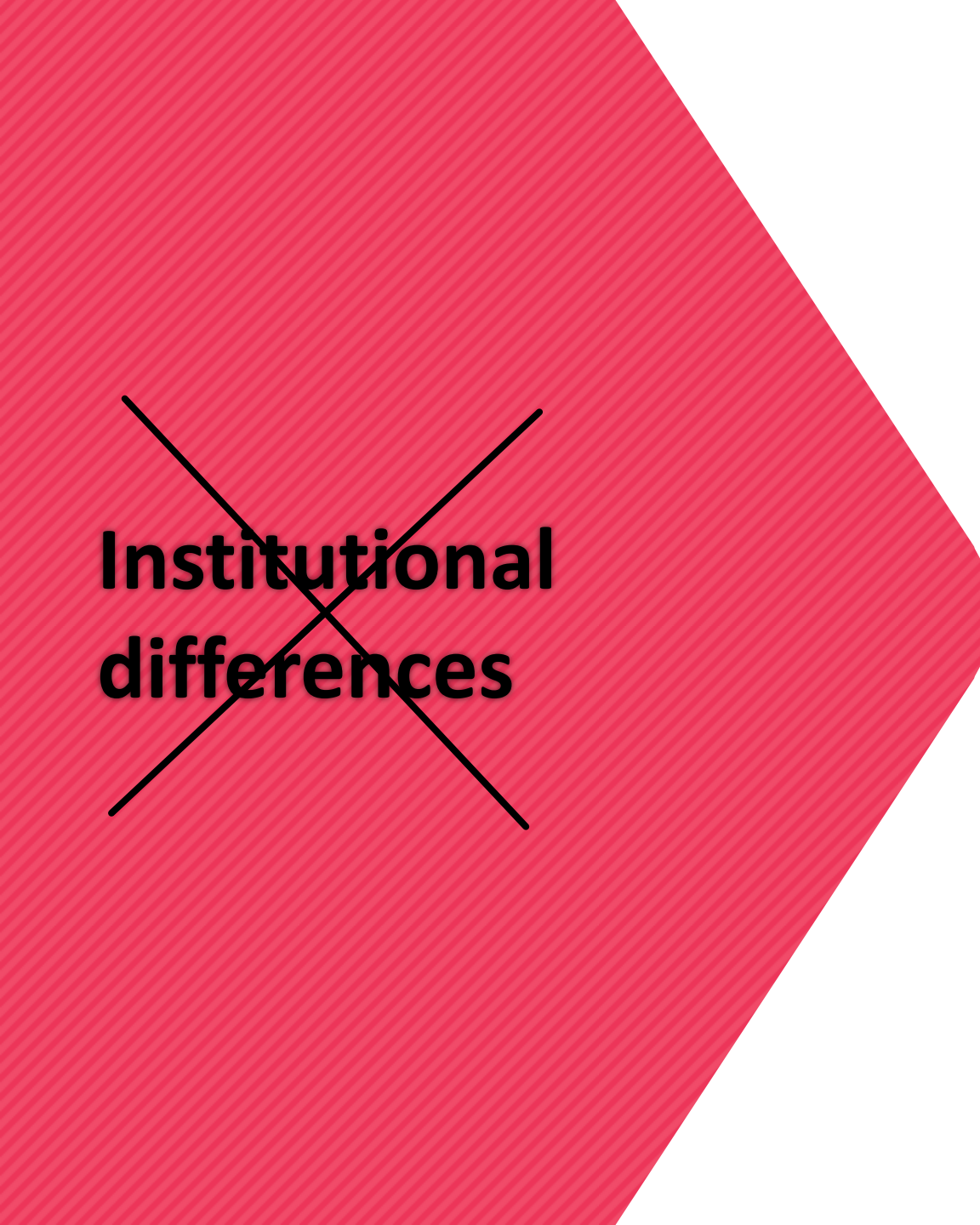
Nature of CS

Technical issues

Providing the right amount of help

Lack of content knowledge

Time constraints



**~~Institutional
differences~~**

The three institutions differed in size, assessment regime and TA roles; however, we found the **same challenges across all three.**



**Be aware that best practice needs to be
defined and spread**

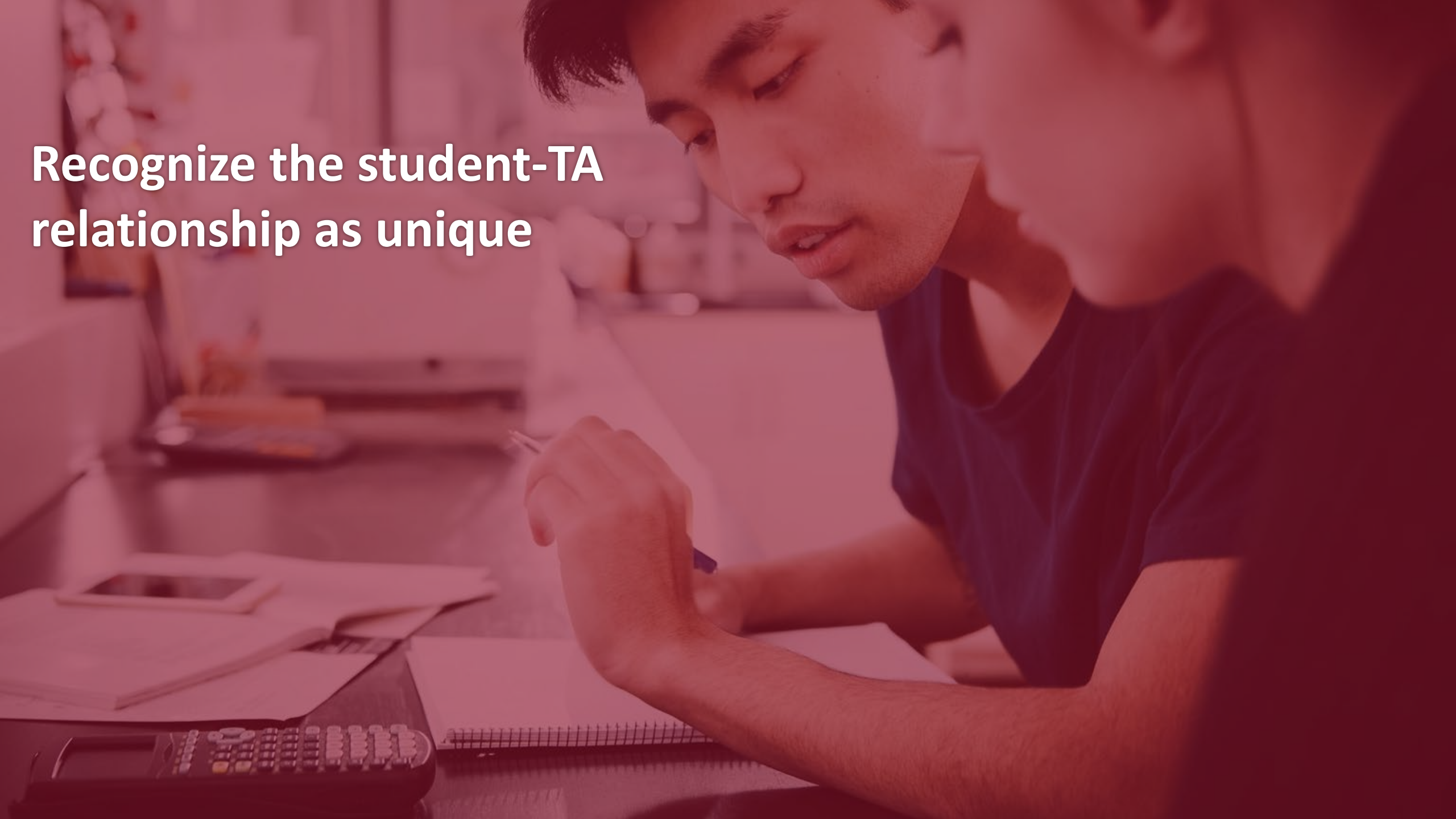
A close-up, low-angle shot of a person's face, focusing on their eyes and nose. They are wearing dark-rimmed glasses. The left lens of the glasses is overlaid with a dense pattern of white binary code (0s and 1s). The right lens is clear, reflecting some light. The background is a solid, dark red color. The overall image has a high-tech, digital aesthetic.

**Acknowledge threats to best
practice and address them**

**Dare to discuss ethical dilemmas and
provide guidelines**



**Recognize the student-TA
relationship as unique**



How to deal with the challenges:

1

Be aware that best practice needs to be defined and spread

CL/PhD

2

Acknowledge threats to best practice and address them

CL/PhD

3

Dare to discuss ethical dilemmas and provide guidelines

CL

4

Recognize the student-TA relationship as unique

CL

TASK - part 1/2

Individual reflection

a)

What is one of your best practices

If you don't have much experience teaching, think of a best practice you have experienced as a teacher

b)

Threats to this best practice

Why is this hard? What is stopping you or others from succeeding? What can be done to support you?

3 minutes
Best practice + threats to this practice



TASK - part 2/2

Group share

In a break-out room:

Each person shares their reflections

Discuss if there are any other threats or solutions

Be prepared to share your main reflections with everyone.



Share!

Thanks for participating!

Questions and comments are welcome.

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