ICO GSS 2026

Programme & Abstracts

ico
Interuniversitair Centrum voor Onderwijswetenschappen

Version Wednesday, 15 April 2026

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Introduction

March 2026

Dear ICO members, panel members and workshop leaders,

It is a great pleasure to welcome you all at Utrecht University for the ICO Graduate Spring School on 16 & 17 April 2026.

The ICO Graduate Spring School is a two-day networking event, in which ICO researchers can meet, mingle, and learn about each others research projects. PhD candidates can practice presenting their project in a safe environment, and ICO Fellows and peers will give them valuable feedback. It gives a good overview of the educational sciences in the Netherlands and Belgium, and prepares the PhDs for presenting on major conferences.

We kick of the GSS on Thursday the 16th of April with panel session on networking, followed by the meet-your-theme group lunch, and the PhD presentation sessions in the afternoon. In the evening you can informally catch up with each other during the drinks in campus café LIVING. On Friday we start with four different workshops. Again, in the afternoon there will be PhD presentation sessions.

We hope you will enjoy the ICO Graduate Spring School. We would like to thank you all in advance for your contributions and active participation. Together we will make the GSS a success.

We are looking forward to meeting you all again!

The GSS 2026 organisation committee,

Chris Witteveen (PhD RUG)
Emma Oudheusden (PhD UvA)
Johannes Serfontein (PhD OU)
Robert-Jan Korteland (PhD UU and HU)
Caroline Vonk (ICO)

How to reach the Graduate Spring School?

The GSS will take place in the Marinus Ruppert Building and the restaurant of the Educatorium of Utrecht University at Utrecht Science Park (USP). USP is easily accessible from Utrecht Central Station by taking tram 20, 21 or 22 or Bus 28 towards Utrecht Science Park and get of at the stop at the Heidelberglaan.

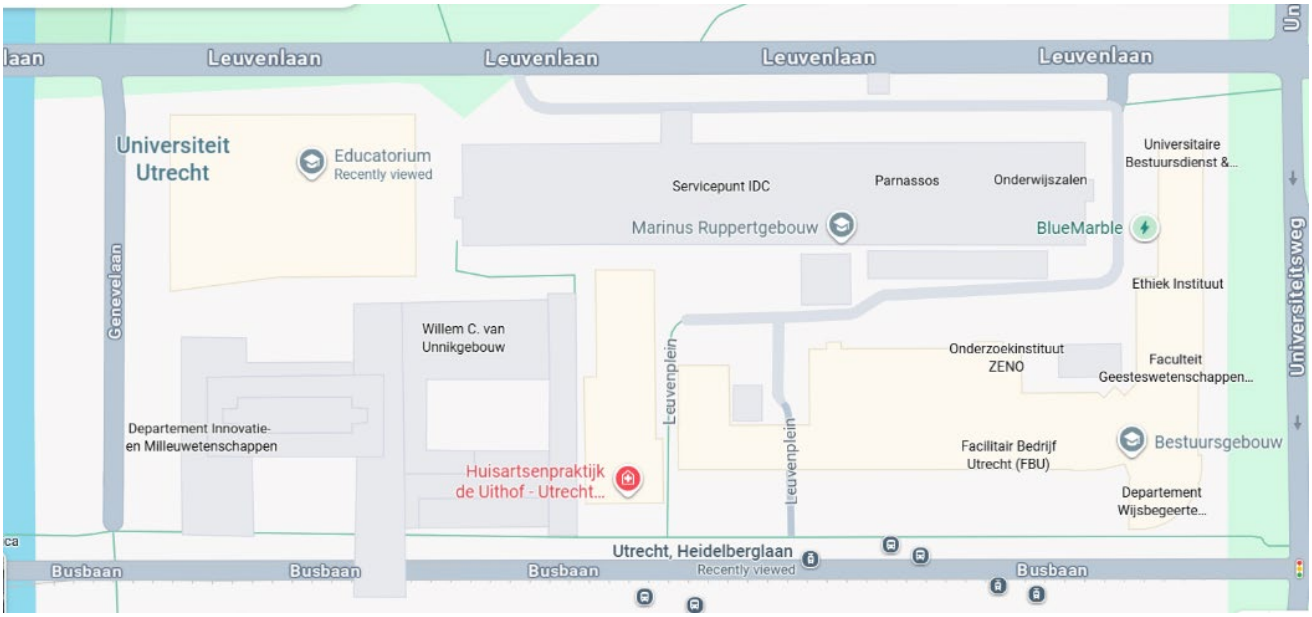
From the Heidelberglaan walk over the Leuvenplein to the back-entrance of the Marinus Ruppert building and the Educatorium. The Educatorium is on the left side of the building from the Leuvenplein.

Thursday reception ICO GSS: Restaurant Educatorium
Friday reception ICO GSS: Main hall of the Ruppert Building

Address:

Restaurant Educatorium
Leuvenlaan 19
3584 CE Utrecht

Marinus Ruppert building
Leuvenlaan 21
3584 CE Utrecht



Programme ICO Graduate Spring School 2026

Thursday 16 April

10:00-10:45	Welcome coffee and tea	Restaurant Educatorium
10:45-12:00	Opening and panel session	Room Wit – Ruppert building
12:00-13:00	Lunch (+ Meet-your-theme group)	Restaurant Educatorium
13:00-15:00	Presentation sessions	Ruppert Building
15:00-15:30	Coffee/tea break	Restaurant Educatorium
15:30-17:00	Presentation sessions	Ruppert Building
17:00 -19:00	GSS Social Gathering	Campus café LIVING

Friday 17 April

9:30-10:00	Welcome coffee and tea	Main hall Ruppert building
10:00-12:00	Workshops	Ruppert building
12:00-13:00	Lunch	Main hall Ruppert building
13:00-15:00	Presentation sessions	Ruppert building
15:00-15:30	Coffee/tea break	Main hall Ruppert building
15:30-16:30	Presentation sessions	Ruppert building

The end

Panel session: Networking

16 April 10:45-12:00 hours, Zaal Wit, Ruppert building

Do you ever wonder how other researchers have build their extensive networks? Or how you can expand your network with people who can contribute to *your* research?

Join the opening session at the ICO GSS, where you can engage in conversation with our panel:

- **Max Kusters**, Assistant Professor of Educational Sciences at the University of Groningen
- **Imke Brummer**, Researcher at Erasmus School of Social and Behavioural Sciences
- **Josien Boetje**, PhD Researcher in Teaching Digital Information Literacy at the Open University and the HU University of Applied Sciences
- **Jolien Mouw**, Assistant Professor of Educational Sciences at the University of Groningen

The discussion will be hosted by **Robert-Jan Korteland**, PhD at Utrecht University and HU University of Applied Sciences.

Meet-your-theme-group-lunch session

16 April 12:00-13:00 hours, Restaurant Educatorium

We invite you to first get something to eat and drink at the buffet in the restaurant – the lunch is fully vegetarian. A separate part of the buffet will be for people with other dietary wishes (in case of food allergies or vegan options). After you have filled your plate, find the table (or room) for your theme group.

The aim of this lunch is for the theme group members to meet others and the coordinators with a research interest in a specific theme. It is an informal lunch meeting where you can meet each other shortly face-to face to inform each other about the courses offered within ICO by the theme group as well as discuss what kind of workshops would be of interest for future courses or workshops.

Not all theme group coordinators can be present, but you can still inform them about any ideas you talk about with each other, by filling in a form which will be on your table.

The Theme groups

No	Theme group	Coordinator present at GSS	Location
T1	Learning and Instruction	Maryam Asoodar	Restaurant
T2	ICT and Education	Omid Noroozi Chris Witteveen	Restaurant
T3	Workplace Learning	Renate Wesselink (online)	Room Ruppert 114
T4	Teaching and Teacher Education	Dineke Tigelaar Milan van Can Simone Polderdijk	Room Ruppert 115
T5	Domain Specific education and learning	Bjorn Wansink Michiel Veldhuis Saskia Arbon	Restaurant
T6	Educational Design and Curriculum development	Susan McKenney (online) Bhagya Sailwal	Room Ruppert 032
T7	Schools and the societal context of education	Nynke Douma	Restaurant
T8	Assessment, evaluation and examination		Restaurant
T9	Higher Education	Renske de Kleijn	Restaurant

ICO social programme

16 April, 17:00 - ? hours, – Campus café Living

Grand café LIVING
Weg tot de Wetenschap 400
3584 CN Utrecht
Next to the tram stop at the Padualaan (tram 20 21 22)

We will end the first day of the ICO GSS 2026 with drinks and some small bites at Grand café LIVING, just a short walk from the Ruppert Building.

After the drinks, there will be a "Walking dinner" at the same spot starting at around 19:00 hours. All ICO members can register for the dinner, also your colleagues who do not take part in de ICO GSS. Do invite them to join!

Participation in the group dinner is only possible if your registration and payment has been made before the 1st of April. After he 1st of April, contact ico@uu.nl to ask for the possibilities for joining.

To join the dinner you can sign up and make your payment here: https://uusalesservices.uu.nl/ico-gss2026-evening-event.

Workshop A. The final steps – Preparing for the last phase of your PhD project

Joost Jansen in de Wal & Thijmen van Alphen (UvA)

Friday 17 April, 10:00-12:00 hours, – Ruppert 005

PhD candidates experience the final phase of their project in different ways. The end is in sight. For some it is a relief or a culmination, for others it is a reality check. In any case, completing a dissertation often takes pressure. After all, it has to be finished (but research is never finished!). Also, the search for a follow-up job often starts to take concrete shape in the final year of your PhD. Besides completing the dissertation itself, defending it is something that PhD students may experience differently. For some it is a holiday equivalent to a wedding day, for others it is a formality or is experienced as hazing. The defence is best when you can stand up for your thesis with verve, in front of your colleagues, family and friends, and have an inspired conversation about it with your committee. But how do you create air and space within yourself for this? In this workshop, we will discuss how to arrange the final phase of your PhD in a pleasant way. We will address questions such as: How do you plan this phase? What is a good way to look at (the writing of) your introduction and discussion chapter? What can you consider when putting together a (reading) committee? What expectations are best to go into your defence with? And how do you manage your supervisors during the final stage? Of course, there is also plenty of room for discussing your own input.

Participants:

Sarah	de Vries
Irene	Douwes-van Ark
Ilona	Fassaert
Sybolt	Friso
Sina	Gottschlich
Myrthe	Lübbers
Marcel	Mooijman
Dorien	Petri
Magdala	Rafael
Eleanor	Rowan
Annemarie	Sänger
Seher	Sayin
Lotte	Schreuders
Johannes	Serfontein
Cassandra	Tho
Fenny	van Daalen-Visscher
Niklas	Wenzel
Tessanne	Wiertsema
Erica	Wijnands-Pot
Chris	Witteveen
Catur	Wulandari
Benji	van Beurden

Workshop B. Q Methodology: An Emerging Method in Educational Research

Tuba Stouthart – Eindhoven University of Technology

Friday 17 April, 10:00-12:00 hours, – Ruppert 111

Q methodology enables researchers to study a person's viewpoints, opinions, beliefs, attitudes, and the like (Brown, 1996). It has been recognized as an emerging method in educational research for investigating subjectivity (Lundberg et al., 2020). By combining both qualitative and quantitative research techniques, Q methodology clusters participants based on their standpoints rather than seeking a statistical representation of the target group. This method explores how participants' perspectives on the studied phenomenon differ or align. In this sense, Q methodology has been described as the most well-developed method for investigating human subjectivity (Dryzek & Holmes, 2002, p.20).

Recently, Q methodology has been used in several studies in educational research (e.g., Chaaban et al., 2023; Stouthart et al., 2025; Yang, 2023). While most of these studies focused on examining participants' views, Lundberg (2022) demonstrated how Q methodology can also be applied as a participatory research approach, highlighting its potential as a tool for reflection.

The aim of this workshop is to introduce participants to the Q methodology as an effective means of capturing human subjectivity. Participants will have the opportunity to experience how we applied Q methodology in a previous study, including the data collection and analysis processes. We believe that allowing workshop participants to engage with the methodology in a manner similar to that of study participants will effectively highlight the methodology's potential and facilitate meaningful discussions on its applications in science education research, and practice

Participants:

Stephany	Angulo
Jet	Bierman
Lorenz	Boeckhorst
Agnes	Brinks
Elske	Brouwer-Schudde
Marjon	Fokkens-Bruinsma
Nynke	Geus
Marie	Gillet
Rebecca	Harterink
Geerte	Holwerda-van den Berg
Amer	Jaganjac
Jacob	Nouta
Shika	Pai
Dagmar	Platte
Magdala	Rafael
Rachel	Reynolds
Geerte	Savenije
Rene	Streutker
Anke	Swanenberg
Jorn	ten Brink
Anoeska	van den Noort
Mylene	van der Scheer
Hedwig	van der Werff
Janine	Verkerk
Maaike	van Bockhooven
Milan	van Can

Workshop C. Open Science and Pre-registration

Brechtje van Zeijts – Utrecht University

Friday 17 April, 10:00-12:00 hours, – Ruppert 114

During this workshop we will shortly discuss the merits and pitfalls of The Open Science movement and how this movement relates to the educational sciences. Subsequently, we will explain why preregistration of your empirical studies could be an important step in increasing the accountability but also the validity of your research. We will provide you with some examples of how to register a study, varying from experimental studies to qualitative studies, and you will also get some hands-on practice in preregistration.

Participants:

Saskia	Arbon
Sarai	Balkenende
Mary-Jo	Diepeveen
Xiaoqi	Feng
Els	Goetschalckx
Jeroen	Janssen
Boukje	Lindijer
Maike	Lolkema
Roberto	Loza
Alice	Middelkoop-Stijsiger
Yol	Nakanishi
Joost	Nikkessen
Hannah	Odink
Tycho	Onderstijn
Emma	Oudheusden
Christos	Palidis
Jingyi	Qiao
Karen	Schreurs
Gerhard	Stoel
Simone	van der Maeden
Lotte	van Kesteren

Workshop D. Responsible use of AI in Education: Human-AI collaboration

Inge Molenaar – Radboud University

Friday 17 April, 10:00-12:00 hours, – Ruppert 029

Inge Molenaar explores the role of artificial intelligence (AI) in education, focusing on hybrid human-AI collaboration. She discusses how AI, both as a tool and an actor, can enhance understanding of learning processes, improve learning theories, and support both students and teachers. Emphasis is placed on connecting learning theories and scientific insights with AI's potential, as well as the impact of AI on teacher and learner autonomy.

Inge illustrates how AI can lead to the replacement, complementation, and augmentation of teachers and learners, offering a practical framework for responsibly integrating AI into educational practices.

Following her introduction, participants will delve into the responsible use of AI in education using the common language of the National Education Lab AI (NOLAI). They will learn how co-creation projects are designed, how to describe AI solutions using this framework, and discuss possible futures and implications of AI in education.

Participants:

Aitana	Bilinski
Marit	Boekema
Jelle	Boers
Janne	Bosma
Sara	de Bruin
Frouke	de Wijs
Laurie	Delnoij
Jimte	Ferwerda
Liesbeth	Kester
Robert-Jan	Korteland
Ruth	Schep
Bo	Sichterman
Dorieke	Swinkels-Veldt
Marieke	Thurlings
Hanno	van Keulen
Yanchen	Zhu

The presentation sessions – explanation of all roles

Paper presentation
Total duration: 30 minutes
· Presentation: 10-15 minutes
· Group discussion: 15 minutes starting with the jr. discussant (5 minutes), and then the sr. discussant (5 min.), followed by the group.

Round Table Session
Total duration: 30 minutes
· Presentation: 5 minutes
· Group discussion: 25 minutes

Poster presentation
Total duration: 1 hour (for 5-6 posters)
The session starts with a short pitch for all posters in the session: 3-5 minutes per poster.
After all pitches the posters will be discussed simultaneously, while the audience can move between the different posters for the remainder of the hour.

Information for the presenter

General Notes

- All presentations and discussions will be conducted in English.
- Be prepared to engage with the audience and discussants to refine your research and presentation skills.
- ICO's goal is for you to enjoy presenting and discussing your work.

Paper Presentation Sessions

Total Duration: 30 minutes per presentation

- **Presentation:** 15 minutes
- **Group Discussion:** 15 minutes (starting with the junior discussant, followed by the senior discussant, and hopefully there will also be some time for a group discussion)

Expectations:

- You have prepared paper (or extended summary) about your research which has been shared with the discussants prior to the session.
- Your presentation should address one or more central aspects of your research project, such as:
    - Theoretical framework and research questions
    - Experimental setup and results
    - Design of a learning environment, teacher training, or assessment instrument
- Remember that the audience has not read your paper, so focus on clarity and engagement.
- Keep track of time: your presentation should not exceed 15 minutes. The chair may signal when your time is nearly up. Include two questions in your paper to help focus the discussion.
- Be prepared to act as a junior discussant for one of your peers' presentations.

Round Table Sessions

Total Duration: 30 minutes per presentation

- **Presentation:** ca. 5 minutes (no more than 10 minutes!)
- **Group Discussion:** ca. 25 minutes

Expectations:
During a round table discussion, you will get the opportunity to have an in-depth discussion on one or two central Issues of your research. To make it easier for the participants to take part in the discussion, you will have made a hand-out of the topic you would like to discuss. After the short presentation, there will be ample time for discussion. The appointed discussant will start the discussion, but it is the goal to involve all people in the audience in the discussion.

- Provide a concise hand-out to support your presentation. This hand-out should include:
    - **Problem Statement:** What is the issue being studied and why is it important?
    - **Round Table Questions:** One or two specific questions relevant to your study.
- Avoid lengthy texts in your hand-out, as the audience will not have time to read extensive material. Use diagrams, graphs, and tables to visualise your information effectively.
- Bring approximately 10–15 copies of your hand-out for the participants.
- No computer, projector, or screen will be provided to ensure an interactive discussion format.

Poster Presentation Sessions

Total Duration: 1 hour

- **Pitch:** 3–5 minutes per presenter
- **Discussion:** ca. 30 minutes of audience interaction

During the ICO Spring School, posters will be grouped into themes as much as possible.
The session starts with a 3-5 minute pitch by the presenters. After this short presentations both the regular audience and the discussants will freely visit the posters and discuss them with its presenter. We have appointed a discussant for all posters, to be sure all presenters will be able to discuss their work. It could be that your discussant is at an other poster at the start of the discussion, so feel free to start talking to other members of your audience.

The chair's role

General Responsibilities

As a chair, your primary role is to moderate the session, ensuring it runs smoothly and on time. You will introduce the presenters, discussants, and the feedback forms at the start of the session. Additionally, you are responsible for creating a safe and inclusive environment where all participants feel comfortable engaging in discussions.

Creating a Safe Environment

- Facilitate discussions in a way that encourages participation from all attendees.
- Be mindful that some PhD candidates may be presenting in English for the first time, which can be a challenging experience. Ensure feedback is constructive and supportive.
- Avoid disruptions during the session by discouraging attendees from switching rooms during presentations. If necessary, allow movement at the beginning or end of a presentation to minimise disturbance.

Feedback Forms

- At the start of each session, distribute feedback forms to the audience.
- Collect all completed feedback forms at the end of the session and return them to the presenter.

Additional Notes

- Chairs are welcome to join discussions and raise questions to stimulate conversation.
- Ensure the audience understands the issues raised by the presenter and feels comfortable contributing to the discussion.

Time Management

- **Paper Presentation Sessions:**
    - Total duration: 30 minutes per presentation.

- Presentation: 15 minutes.
- Group discussion: 15 minutes (starting with the junior discussant, followed by the senior discussant).
- Ensure the session stays on schedule by keeping track of time during both the presentation and discussion.

- **Round Table Sessions:**
  - Total duration: 30 minutes per presentation.
  - Presentation: ca. 5 minutes (no more than 10 minutes!).
  - Group discussion: ca. 25 minutes.
  - Monitor time closely to ensure both the presentation and discussion are balanced.

- **Poster Presentation Sessions:**
  - Total duration: 1 hour.
  - Short pitch: 3–5 minutes per presenter for all posters in the session (5-6 posters)
  - Discussion: The audience and discussants will visit posters freely for the remainder of the hour.
  - Introduce the session and ensure all presenters receive feedback.

The discussant's role

General instructions for all sessions:

Creating a Safe Environment

• Always aim to provide feedback in a constructive and encouraging manner.
• Be sensitive to the fact that presenting in English may be a new and challenging experience for some PhD candidates.
• Stimulate productive discussions and offer advice that helps presenters improve their work while feeling supported.
• You will receive a copy of a paper or an extended summary in advance to help you prepare.
• If the topic is outside your own area of expertise, involve the audience by raising key issues related to the findings and encouraging group discussion.

Additional Notes

• Presentations and discussions will be conducted in English.
• Feedback should be concise, constructive, and aimed at fostering a positive and safe environment for all participants.

Paper presentation sessions

At all paper sessions the presenters will also act as junior discussants for one of their peers' presentations in the same session. They will start the discussion, followed by the "senior" discussant.

Role of the Discussant in a paper presentation session:

• Provide constructive and supportive feedback on the presenter's work.
• Feedback should be oral and last no more than five minutes per discussant.
• Smaller points can be shared as written comments or discussed informally after the session.

Poster Presentation Sessions

Total Duration: 1 hour

- **Pitch:** Each presenter will deliver a short pitch (3–5 minutes).
- **Discussion:** After the pitches, the audience and discussants will visit the posters and engage in discussions with the presenters.

Role of the Discussant:

- Ensure all poster presenters have someone to discuss their work with.
- If the audience is actively engaging with a presenter, move on to another poster to ensure all presenters receive feedback.
- You may be assigned to multiple posters, so manage your time effectively to provide feedback to all assigned presenters.
- Feedback should address both content and layout:

    - Clarity of the poster layout
    - How well the poster captures attention
    - Clarity of textual and graphical information
    - Originality of the poster design

Round Table Sessions

Total duration: 30 minutes per presentation.

- Presentation: ca. 5 minutes (no more than 10 minutes!).
- Group discussion: ca. 25 minutes.

The discussant main role is to start the discussion, and keep the discussion going if necessary. If you feel the audience is joining in the discussion, give them space to do so.

Schedule presentations Session 1, Thursday 16 April

13:00 h	**1A-1 Poster Presentation, Ruppert 031 Educational Innovation and Differentiation**	13:00 h	**1B Paper presentation, Ruppert 111 Primary School**	**1C Paper presentation, Ruppert 114 Teacher education and support**	**1D Round Table, Ruppert 032 ICT in education**
Chair	*Rene Streutker*	***Chair***	*Simone van der Maeden*	*Paulien Meijer*	*Omid Noroozi*
	***Presenter:* Hannah Odink** *Discussant:* Jacqueline Wong ***Presenter*: Anna Rebel** *Discussant:* Jacqueline Wong ***Presenter*: Agnes Brinks** *Discussant:* Marieke van Geel ***Presenter*: Alice Middelkoop-Stijsiger** *Discussant:* Marieke van Geel ***Presenter*: Sarai Li-Ping Balkenende** *Discussant:* Marjolein Deunk ***Presenter:* Maike Lolkema** *Discussant:* Marjolein Deunk		***Presenter*: Dorien Petri** *Discussant:* Fenny van Daalen-Visscher; Petrie van der Zanden	***Presenter:* Seher Sayin** *Discussant:* Milan van Can; Christa Krijgsman	***Presenter*: Els Goetschalckx** *Discussant:* Ellen Kok
		13:30h			
		Chair	*Simone van der Maeden*	*Paulien Meijer*	*Omid Noroozi*
			***Presenter*: Fenny van Daalen-Visscher** *Discussant:* Marloes van Roon; Petrie van der Zanden	***Presenter*: Milan van Can** *Discussant:* Seher Sayin; Christa Krijgsman	***Presenter:* Lotte Schreuders** *Discussant:* Ellen Kok
14:00 h	**1A-2 Poster Presentation Educ. Enrichment and Extracurricular Activ.**	14:00 h			
Chair	*Hedwig van der Werff*	***Chair***	*Simone van der Maeden*	*Christa Krijgsman*	*Ellen Kok*
	***Presenter*: Joost Nikkessen** *Discussant:* Marieke van Geel ***Presenter*: Yol Nakanishi** *Discussant:* Marjolein Deunk ***Presenter*: Tessanne Wiertsema** *Discussant:* Michiel Veldhuis *Hedwig van der Werff* ***Presenter:* Saskia Arbon** *Discussant:* Pieter van Lamoen *Hedwig van der Werff* ***Presenter*: Jimte Ferwerda** *Discussant:* Pieter van Lamoen		***Presenter*: Marloes Roon** *Discussant:* Dorien Petri; Tim Mainhard	***Presenter*: Geerte Holwerda** *Discussant:* Manjie Zhu; Paulien Meijer	***Presenter*: Lauren Beehler** *Discussant:* Gillian Saunders
		14:30 h			
		Chair		*Christa Krijgsman*	*Ellen Kok*
				***Presenter*: Manjie Zhu** *Discussant:* Geerte Holwerda; Paulien Meijer	***Presenter*: Mary-Jo Diepeveen** *Discussant:* Omid Noroozi

Schedule presentations Session 2, Thursday 16 April

15:30 h	**2A-1 Poster Presentation, Ruppert 031** **Student identity / Higher ed / Belonging**	15:30 h	**2B Paper presentation, Ruppert 111** **Emotion / Higher educ.**	**2C Paper presentation, Ruppert 114** **Student and teacher dev.**	**2D Paper presentation, Ruppert 116** **Higher education**	**2E Round Table, Ruppert 032** **Qualitative**
Chair	*Jorn ten Brink*	***Chair***	*Marieke van Geel*	*Harmen Schaap*	*Marjolein Deunk*	*Hanno van Keulen*
	***Presenter*: Elske Brouwer-Schudde** *Discussant:* Lisette Hornstra ***Presenter*: Lotte van Kesteren** *Discussant:* Lisette Hornstra ***Presenter:* Claudia Gomes** *Discussant:* Michiel Veldhuis ***Presenter*: Christos Palidis** *Discussant:* Michiel Veldhuis		***Presenter*: Johannes Serfontein** *Discussant:* Catur Wulandari; Thijmen van Alphen	***Presenter*: Sybolt Friso** *Discussant:* Eleanor Rowan; Max Kusters	***Presenter*: Wenyi Chu** *Discussant:* Sarah de Vries; Marjon Fokkens-Bruinsma	***Presenter*: Marie Gillet** *Discussant:* Robert-Jan Korteland
16:15 h	**2A-2 Poster Presentation** **Transition / Kindergarten**	16:00 h				
Chair	*Sara de Bruin*	***Chair***	*Marieke van Geel*	*Max Kusters*	*Marjon Fokkens-Bruinsma*	*Robert-Jan Korteland*
	***Presenter*: Justine Griffioen** *Discussant:* Ellen Kok ***Presenter*: Simone van der Maeden** *Discussant:* Ellen Kok ***Presenter*: Tycho Onderstijn** *Discussant:* Gilian Saunders ***Presenter:* Bhagyashree Sailwal** *Discussant:* Gilian Saunders		***Presenter*: Catur Wulandari** *Discussant:* Irene Douwes-van Ark; Thijmen van Alphen	***Presenter:* Ilona Fassaert** *Discussant:* Sybolt Friso; Harmen Schaap	***Presenter*: Sarah de Vries** *Discussant:* Wenyi Chu; Marjolein Deunk	***Presenter:* Frouke de Wijs** *Discussant:* Hanno van Keulen
		16:30 h				
		Chair	*Thijmen van Alphen*	*Max Kusters*		*Robert-Jan Korteland*
			***Presenter*: Irene Douwes-van Ark** *Discussant:* Johannes Serfontein; Marieke van Geel	***Presenter*: Eleanor Rowan** *Discussant:* Ilona Fassaert; Harmen Schaap		***Presenter*: Kathinka van Doesum** *Discussant:* Hanno van Keulen

Schedule presentations Session 3, Friday 17 April

13:00 h	**3A-1 Poster Presentation, Ruppert 031 Higher education**	13:00 h	**3B Paper presentation, Ruppert 111 Inclusion, Diversity, and Ownership**	**3C Paper presentation, Ruppert 114 Assessment and performance**	**3D Round Table, Ruppert 032 Teachers and Society**	**3E Round Table, Ruppert 029 Learning and identity**
Chair	*Alice Middelkoop*	***Chair***	*Sophie Oudman*	*Xiaoqi Feng*	*Yol Nakanishi*	*Hannah Odink*
	***Presenter*: Marcel Mooijman** *Discussant:* Gerhard Stoel ***Presenter*: Mylene van der Scheer** *Discussant:* Gerhard Stoel ***Presenter*: Jacob Nouta** *Discussant:* Iris van der Tuin ***Presenter:* Stephany Angulo** *Discussant:* Iris van der Tuin ***Presenter*: Amer Jaganjac** *Discussant:* Lauren Beehler **Presenter: Benji van Beurden** *Discussant: Geerte Savenije*		***Presenter*: Janne Bosma** *Discussant:* Myrthe Lubbers; Marjon Fokkens-Bruinsma	***Presenter*: Boukje Lindijer** *Discussant:* Niklas Wenzel; Laurie Delnoij	***Presenter:* Sara De Bruin** *Discussant:* Marieke Thurlings	***Presenter*: Jet Bierman** *Discussant:* Jeroen Janssen
		13:30 h				
		Chair	*Sophie Oudman*	*Xiaoqi Feng*	*Yol Nakanishi*	*Hannah Odink*
			***Presenter*: Cassandra Tho** *Discussant:* Rinotha Senathirajah; Marjon Fokkens-Bruinsma	***Presenter*: Anke Swanenberg** *Discussant:* Annemarie Sänger; Laurie Delnoij	***Presenter*: Dorieke Swinkels-Veldt** *Discussant:* Marieke Thurlings	***Presenter:* Sina Gottschlich** *Discussant:* Jeroen Janssen
14:00 h	**3A-2 Poster Presentation, Secondary School Subjects**	14:00 h				
Chair	*Christos Palidis*	***Chair***	*Marjon Fokkens Bruinsma*	*Laurie Delnoij*	*Yol Nakanishi*	*Hannah Odink*
	***Presenter*: Kelly Gort** *Discussant:* Geerte Savenije ***Presenter*: Dagmar Platte** *Discussant:* Geerte Savenije ***Presenter*: Emma Oudheusden** *Discussant:* Gerhard Stoel ***Presenter:* Hedwig van der Werff** *Discussant:* Iris van der Tuin ***Presenter*: Marit Boekema** *Discussant:* Jimte Ferweda		***Presenter*: Myrthe Lubbers** *Discussant:* Cassandra Tho; Sophie Oudman	***Presenter*: Annemarie Sänger** *Discussant:* Boukje Lindijer; Xiaoqi Feng	***Presenter*: Jorn ten Brink** *Discussant:* Tim Mainhard	***Presenter*: Shika Pai** *Discussant:* Liesbeth Kester
		14:30 h				
		Chair	*Marjon Fokkens Bruinsma*	*Laurie Delnoij*	*Yol Nakanishi*	*Hannah Odink*
			***Presenter:* Rinotha Senathirajah** *Discussant:* Janne Bosma; Sophie Oudman	***Presenter*: Niklas Wenzel** *Discussant:* Anke Swanenberg; Xiaoqi Feng	***Presenter*: Karina de Waal** *Discussant:* Tim Mainhard	***Presenter*: Sofia van Santen** *Discussant:* Liesbeth Kester

Schedule presentations Session 4, Friday 17 April

15:30 h ***Chair***	**4A Poster Presentation, Ruppert 031** **STEM learning** *Stephany Angulo*	15:30 h ***Chair***	**4B Paper presentation, Ruppert 111** **GenAI Learning** *Mary Jo Diepeveen*	**4C Paper presentation, Ruppert 114** **Domain instruction** *Liesbeth Kester*	**4D Round Table, Ruppert 032** **Mixed Methods** *Mylene van der Scheer*	**4E Round Table, Ruppert 029** **Mixed Methods** *Benji van Beurden*
	***Presenter*: Jingyi Qiao** *Discussant:* Iris van der Tuin ***Presenter*: Erica Wijnands-Pot** *Discussant:* Iris van der Tuin ***Presenter:* Robert-Jan Korteland** *Discussant:* Hanno van Keulen ***Presenter*: Janine Verkerk** *Discussant:* Hanno van Keulen		***Presenter*: Bo Sichterman** *Discussant:* Yanchen Zhu; Jeroen Janssen	***Presenter*: Lorenz Boeckhorst** *Discussant:* Nynke Geus; Gerhard Stoel	***Presenter*: Magdala Rafael** *Discussant:* Geerte Savenije	***Presenter*: Rachel Reynolds** *Discussant:* Marieke Thurlings
		16:00 h ***Chair***	**GenAI Learning** *Mary Jo Diepeveen*	**Domain instruction** *Gerhard Stoel*	**Mixed Methods** *Mylene van der Scheer*	**Mixed Methods** *Benji van Beurden*
			***Presenter*: Yanchen Zhu** *Discussant:* Bo Sichterman; Jeroen Janssen	***Presenter:* Nynke Geus** *Discussant:* Lorenz Boeckhorst; Liesbeth Kester	***Presenter*: Rene Streutker** *Discussant:* Geerte Savenije	***Presenter*: Anoeska van den Noort** *Discussant:* Marieke Thurlings

Abstracts 16 April, 1A Poster presentations

13:00 h	**1A-1 Poster Presentation, Ruppert 031**
Chair	*Rene Streutker*
	Presenter: **Hannah Odink** *Discussant:* Jacqueline Wong **Title: Easy as ABC: Implementation of a Professional Development Intervention for Students' Externalizing Behavior** *Authors: H. Odink, W.E. Kupers, A.A. de Boer, M. Fokkens-Bruinsma, M.J. Warrens*
	Students' externalizing behavior is a growing concern in education, negatively impacting students' and teachers' well-being. Professional Development (PD) interventions can support teachers and students, but effectiveness is dependent on how these interventions are embedded in the school context. Barriers and facilitators influence implementation on different levels: context and community level (e.g., policies, funding), school level (e.g., leadership, organizational culture), implementer level (e.g., training), and intervention level (e.g., compatibility). This study focusses on the implementation of the ABC intervention: a PD intervention in Dutch EBD schools aimed at preventing and de-escalating externalizing behaviors, with research questions: 'how is the ABC intervention being implemented at EBD schools?' and 'how is the implementation of the ABC intervention associated with social safety, incidents, and absenteeism and turnover?' This mixed-methods study consisted of a survey among all schools that implemented the ABC-intervention (N = 17), followed up with interviews with school leaders, behavioral experts, and teachers (N = 35). Content analysis of the interviews is currently being conducted, resulting in an overview of barriers and facilitators. Survey results show large differences between schools regarding implementation. Preliminary results from interviews indicate that the ABC intervention is a socially valid intervention that is described by teachers as valuable and necessary. Teachers indicate that preconditions such as sufficient time, physical space, and structural support are essential for sustainable implementation, as well as training and peer supervision. At the school level, several facilitators have been found, such as appointing a designated staff member as the driver of the intervention and active, connective leadership. Examples of barriers include a lack of structural time for debriefings following incidents. Relationships between elements of implementation fidelity and barriers and facilitators will be discussed. Potential relationships with outcome variables will receive special attention, with discussion points such as how to interpret these with care. *Keywords: Professional Development* *Externalizing Behavior* *Implementation*

13:00 h	**1A-1 Poster Presentation, Ruppert 031**
Chair	*Rene Streutker*
	***Presenter*: Anna Rebel** *Discussant:* Jacqueline Wong **Title: Design Principles for Supporting Self-Regulated Learning in Secondary Education Coaching** *Authors: Anna Rebel; Joost Jansen in de Wal; Jaap Schuitema; Carla van Boxtel*
	In innovative secondary schools that employ a student-centered learning approach, students are expected to take substantial responsibility for their own learning. This educational context calls for forms of guidance that explicitly support the development of self-regulated learning (SRL). One-to-one coaching conversations between teachers and students play a central role in this guidance, yet findings from our earlier study suggest that SRL instruction in such conversations often remains implicit, leaving its potential for strategy development underused. This poster presents an evaluation study of design principles underlying a coaching method aimed at strengthening SRL in individual coaching conversations. The method builds on theoretical insights into SRL that distinguish between macro-level general approaches to learning and micro-level regulation during concrete learning tasks, and operationalizes these insights through three core design principles: (1) jointly diagnosing students' SRL using formative assessment, (2) providing explicit strategy instruction, and (3) gradually transferring responsibility for strategy use to the student. The poster focuses specifically on the methodological approach used to analyse how coaches and students evaluate the relevance, consistency, practicality, and expected effectiveness of these design principles, and how the principles are enacted in coaching conversations. As data analysis is currently ongoing, no preliminary findings are presented. Instead, the poster invites discussion about design choices, analytical strategies, practical implementation, and transfer to other educational contexts. *Keywords: Self-regulated learning (SRL)* *Educational design research* *Formative assessment* *Strategy instruction* *Qualitative evaluation*
13:00 h	**1A-1 Poster Presentation, Ruppert 031**
Chair	*Rene Streutker*
	***Presenter*: Agnes Brinks** *Discussant:* Marieke van Geel **Title: Supporting peer feedback dialogues to promote self-regulated learning of students in secondary education** *Authors: Agnes Brinks MSc; prof. dr. Desirée Joosten-ten Brinke; dr. Gerry Geitz*
	Developing self-regulated learning in students is a crucial task for teachers in secondary education (Sins, 2023). These skills facilitate secondary school students' transition to higher education. However, in higher education, these skills are often perceived underdeveloped (Vosniadou, 2020).

	Formative assessment practices support the development of self-regulated learning (Black & William, 2009), especially when students play an active role in feedback processes within these practices (Boud, 2000; Meusen-Beekman et al. 2016; Nicol & Macfarlane-Dick, 2006). This active role can be shaped through peer assessment activities. Feedback dialogues between students about their learning are an essential part of these activities (Boud & Soler, 2016; Carless, 2013; Geitz et al., 2015; Kneyber et al., 2024). However, these dialogues do not come about automatically; it is crucial teachers support them (Geitz et al., 2015). How teachers can support peer feedback dialogues that foster self-regulated learning skills remains insufficiently understood. To advance both the theory on supporting peer feedback dialogues within formative assessment, aimed at developing self-regulated learning, and the application within practice, educational design research (McKenney & Reeves, 2019) is conducted. Prior to the development of an intervention an in-depth analysis and exploration is carried out within a Dutch school for secondary education where formative assessment is implemented. Research is conducted on how peer feedback dialogues are deployed, as part of peer assessment activities within the current formative assessment practices, and which practical and theoretical factors should be considered developing teacher intervention to bridge the gap between current and desirable practice. The first results are expected in April 2026 and will set the stage for the next phases of the research project. The initial outlines for the design and construction phase, and the evaluation and reflection phase, which will partially take place in parallel, will be the topic of the poster presentation. *Keywords: secondary education, peer feedback dialogues, formative assessment, educational design research*
13:00 h	**1A-1 Poster Presentation, Ruppert 031**
Chair	*Rene Streutker*
	***Presenter*: Alice Middelkoop-Stijsiger** *Discussant:* Marieke van Geel **Title: VET second career teachers' belief-profiles. A cluster analysis of educational beliefs and the association with expertise, motivation and job demands.** *Authors: Alice Middelkoop-Stijsiger, Piety Runhaar, Harm Biemans*
	This study identifies three educational belief profiles among Dutch second-career entrants in vocational education and training (VET)—namely Strong Hybrid, Balanced Hybrid, and Low Subject-Oriented—which differ in their combinations of student-centred and subject-centred beliefs. These profiles are associated with levels of perceived required expertise and with the timing of enrolment in the alternative certification programme, whereas demographic factors are less distinctive. This suggests that professional identity formation and mentoring in VET would benefit from differentiation based on these belief configurations and perceptions of expertise. Across profiles, intrinsic motivation is generally high, while perceptions of workload vary substantially within profiles. *Keywords: Educational belief profiles; second-career VET teachers; perceived required expertise; timing of enrolment; differentiated mentoring*

13:00 h	**1A-1 Poster Presentation, Ruppert 031**
Chair	*Rene Streutker*
	***Presenter*: Sarai Li-Ping Balkenende** *Discussant:* Marjolein Deunk **Title: Needs to be discovered: adapting education to students with Complex Communication Needs** *Authors: Sarai Li-Ping Balkenende*
	Students with Complex Communication Needs (CCN) experience communication difficulties resulting from the combination of two or more disabilities, such as hearing loss, intellectual disability, and physical impairment. These challenges affect both expressive and receptive communication, making it challenging for teachers to assess whether students understand the educational content, whether the established learning goals are appropriate, and whether the educational activities align with the students' needs. Research on students with CCN, suitable learning goals for them, and educational needs within this group is limited, particularly compared to other groups within special education. This study aims to explore which learning goals and educational needs are currently identified for students with CCN and how education is adapted. Personal Learning Plans (PLPs) are collected from students across all Kentalis CCN schools in the Netherlands, including four primary special education ("Speciaal Onderwijs" SO) and four secondary special education ("Voorgezet Speciaal Onderwijs" VSO) settings, resulting in 32–48 PLPs. In addition, five focus group sessions are conducted with 20–30 educational professionals (teachers, internal counselors, speech therapists, and behavioral specialists) to examine how education is adapted for students with CCN. Data are analyzed using qualitative content analysis with both inductive and deductive coding. Preliminary findings from the PLPs indicate that learning objectives are primarily adapted by extending the time students spend working toward curriculum goals. Focus group results show that teachers adapt education through continuous monitoring, close collaboration with colleagues, and the application of personal and professional knowledge. While some of this expertise is documented in daily reports, emails, and evaluations, much remains implicit. These findings highlight the central role of collaboration and teachers' knowledge and experience in adapting education for students with CCN. Future research will examine how these insights can contribute to the development of a Dynamic Assessment to support teachers with varying levels of expertise. *Keywords: Special Education* *Learning goals* *Complex Communication Needs* *Qualitative Content Analysis* *Focus group sessions*

13:00 h	**1A-1 Poster Presentation, Ruppert 031**
Chair	*Rene Streutker*
	***Presenter*: Maike Lolkema** *Discussant:* Marjolein Deunk **Title: Learning to teach controversial topics: a focus on the curricula of teacher training colleges** *Authors: Maike Lolkema*
	This study aims to gain an understanding of how teaching about controversial topics is part of curricula of teacher training colleges. A Critical Discourse Analysis will be used to gain insights on dominant discourses and how these influence curricula. *Keywords: Democratic education, qualitative research, curriculum*
14:00 h	**1A-2 Poster Presentation, Ruppert 031**
Chair	*Hedwig van der Werff*
	***Presenter:* Joost Nikkessen** *Discussant:* Marieke van Geel **Title: Multiperspectival Heritage Education: Co-design between Schools and Heritage Institutions** *Authors: Supervisors: Prof. Dr. James Kennedy, Dr. Hanneke Tuithof, & Dr. Wouter Smets. PhD candidate: Joost Nikkessen.*
	MESOE (Multiperspectivistische Erfgoededucatie door Samenwerking tussen Onderwijs en Erfgoedinstellingen) is a collaborative project between Utrecht University, Erasmus University Rotterdam, and a professional learning community [PLC]. This PLC consists of primary and secondary school teachers as well as heritage educators from the Utrecht and Rotterdam regions. Through collaboration between schools and heritage institutions, we seek to exchange and further develop knowledge about heritage education in a superdiverse society. In urban contexts such as Utrecht and Rotterdam, educators face the challenge of equipping students with skills to navigate different values and emotions, both in the classroom and in society at large. Learning activities for a diverse student population can become more meaningful through physical encounters with heritage objects. Artefacts, museum objects, artworks, and buildings can function as conversation pieces that make multiple perspectives in the past and present (multiperspectivity) tangible and open for discussion (Savenije et al., 2014; Logtenberg et al., 2020). Through educational design research [EDR] and interviews with the PLC, this project analyses (1) the conditions under which knowledge about heritage education can be recontextualised across formal and informal learning environments, and (2) the pedagogical content knowledge [PCK] teachers and heritage educators use when designing object-based learning activities. In doing so, we aim to foster sustainable partnerships between schools and heritage institutions and to provide empirical support for object-based heritage education. This poster presentation – as work in progress – visualises the framework of ongoing participatory, process-driven design research. In line with MESOE's

	collaborative approach, it invites discussion of cases related to data collection in EDR and strategies for analysing affective engagement with heritage objects. *Keywords: multiperspectivity; heritage education; professional learning community [PLC]; pedagogical content knowledge [PCK]; object-based learning [OBL]; school-heritage institution partnerships.*
14:00 h ***Chair***	**1A-2 Poster Presentation, Ruppert 031** *Hedwig van der Werff*
	***Presenter*: Yol Nakanishi** *Discussant:* Marjolein Deunk **Title: Fostering Resilience in the Classroom: Teachers' Experiences with Children with a Refugee Background** *Authors: Yol Nakanishi, Marijn van Dijk, Elisa Kupers, Myrte Gosen*
	School is an important social place for children with a refugee background (Pharos, 2022). Feeling safe and belonged, and experiencing success at school, are crucial for resilience and recovery after traumatic experiences (Miri, 2024). Protective factors, such as positive social contacts and a positive self-image, play an essential role in this process (Fazel et al., 2012). Teachers and teaching assistants are key figures in fostering these factors, yet they also face challenges (McDiarmid et al., 2022). Previous research shows that children with a refugee background have fewer protective factors than their peers (Leeuwestein et al., 2024). At the same time, little is known about how teachers and teaching assistants strengthen these factors. In the present study, teachers and teaching assistants completed a questionnaire (n = 132) addressing (a) what they themselves see as protective factors, and (b) their views on the presence, importance, and their perceived influence on six protective factors (positive contact with teachers/teaching assistants, positive contact with peers, positive self-image, self-regulation skills, parental involvement with the child, and parental involvement with the school). Subsequently, interviews were conducted (n = 30) to explore why these factors are considered important and how teachers and teaching assistants work to strengthen them in practice. Of the six factors, positive contact, particularly between teacher/teaching assistant and student, was perceived as the most present and most important factor, and as the factor over which participants felt they had the greatest influence. In addition, several additional protective factors were identified: (1) active recognition and acknowledgment of students' own language and culture; (2) feeling seen and valued; (3) awareness and sensitivity for the refugee experience and for being a newcomer; (4) structured and predictable classroom environment; and (5) appropriate and high-quality education. Preliminary interview findings emphasise the importance of the teacher–student relationship for the wellbeing of children with a refugee background. This relationship is seen as the foundation for a positive learning environment and for strengthening other protective factors. *Keywords: Children with refugee background, Teacher's experiences, Primary education*
14:00 h ***Chair***	**1A-2 Poster Presentation, Ruppert 031** *Hedwig van der Werff*

	***Presenter*: Tessanne Wiertsema** *Discussant:* Michiel Veldhuis **Title: School-offered extracurricular enrichment programs: How extracurricular enrichment can contribute to development.** *Authors: Tessanne Wiertsema*
	Primary education often extends beyond formal curricula, incorporating extracurricular programs that provide structured learning experiences outside traditional schooling. These programs, categorized as non-formal education, aim to address educational inequities by targeting minoritized youth. However, research highlights disparities in access to these opportunities, with minoritized youth often limited to academic remediation programs, or shadow education, rather than enrichment activities. While shadow education may improve academic outcomes for some, it risks perpetuating inequities by neglecting holistic development. This paper presents a scoping review of school-offered extracurricular enrichment programs (SEEP) designed for minoritized youth. Unlike shadow education, SEEP focuses on enrichment activities such as arts, sports, and social-emotional learning, aiming to foster both soft skills and academic achievement. The central research question is: How should SEEP be designed to support the soft skills and academic achievements of minoritized youth? Using studies published between 2009 and 2025, this review identifies key elements of effective SEEP, including structured, sequenced, and cultural sustainability. Findings suggest that SEEP can promote equity and inclusion by integrating frameworks such as SAFE (Sequenced, Active, Focused, Explicit) and QuEST (Quality Enrichment Standards Tool), alongside culturally sustainable practices. These approaches emphasize designing curricula through the cultural frames of reference of participating youth while adapting to their dynamic needs. The review underscores the importance of non-formal learning environments that prioritize adaptability to support both academic and personal growth. SEEP has the potential to foster holistic development and contribute to the overall well-being of minoritized youth. *Keywords: Extracurricular activities - primary education - minoritized - equity*
14:00 h	**1A-2 Poster Presentation, Ruppert 031**
Chair	*Hedwig van der Werff*
	***Presenter*: Saskia Arbon** *Discussant:* Pieter van Lamoen **Title: Teaching critical thinking about a socio-scientific issue (SSI): dairy production and consumption** *Authors: Saskia Arbon, Stephan Venmans, Tessa van Schijndel, Jaap Schuitema, Geerte Savenije, Carla van Boxtel*
	Introduction. Teaching young people to think critically about socio-scientific issues (SSIs) is a key objective of education. In discussions about SSIs, people use arguments based on both knowledge and values. To help students identify, understand and question the knowledge and values used, a lessons series was designed. The current study reports on the design and pilot test of this six-lesson series aimed at fostering critical thinking about a concrete SSI: dairy production and consumption. With this pilot test, the consistency, practicality, and perceived effectiveness of the lessons was evaluated using an educational design research framework. Design principles. The design is based on five principles derived from

	research on critical thinking and SSI education: (1) explicit instruction of critical thinking skills; (2) working from a central, exploratory question; (3) attention to interests and emotions; (4) using authentic sources with different, conflicting perspectives; and (5) promoting dialogue. Method. 150 Dutch students took part in the lessons series (age 14-16 years old), taught by three experienced teachers. Data were collected through classroom observations, teacher interviews, student focus groups, and a pre- and posttest. Analyses are still in progress. Initial findings will be reported on the poster at the time of the conference. Contribution. This study provides a concrete, classroom-tested example for integrating critical thinking about knowledge and values into SSI-based science education. *Keywords: Critical Thinking; Socio-scientific issues; Design Principles: Educational Design Research*
14:00 h	**1A-2 Poster Presentation, Ruppert 031**
Chair	*Hedwig van der Werff*
	***Presenter*: Jimte Ferwerda** *Discussant:* Pieter van Lamoen **Title: Citizenship Education: conceptualizations, pedagogies, and school practices** *Authors: Jimte Ferwerda, Hanke Korpershoek, Irene Poort, Marjolein Deunk*
	Citizenship education encompasses a wide range of normative conceptualizations that vary according to social, political, and cultural contexts. This study addresses the resulting conceptual fragmentation by examining the extent to which contemporary approaches to citizenship education meaningfully differ. A systematic literature review covering the period 2015–2025 yielded 2,720 publications, of which 37 articles were selected based on their integration of conceptual reflection, pedagogical theory, and school practice. Using an inductive thematic analysis, four clusters of citizenship education were identified: democratic, global, multicultural, and environmental citizenship education. While these clusters emphasize different normative concerns—such as democratic participation, global responsibility, diversity, or sustainability—they show substantial overlap in both desired civic behaviors, attitudes, and competences, as well as pedagogical approaches. Across all clusters, critical thinking, responsibility, action, and respect for differences are central aims, supported by student-centered pedagogies such as empathetic, collaborative, and inquiry-based learning. The study contributes a clarifying framework for research, curriculum design, and educational practice in citizenship education. *Keywords: Citizenship Education, Pedagogy, Secondary Education, Qualitative Systematic Literature Review*

Abstracts 16 April, 1B Paper presentations

13:00 h	**1B Paper presentation, Ruppert 111**
Chair	*Simone van der Maeden*

	Presenter: **Dorien Petri** *Discussant:* Fenny van Daalen-Visscher; Petrie van der Zanden **Title: Integrating cultural knowledge in primary education: Teachers' practices, purposes and challenges in operationalizing culturally responsive teaching** *Authors: Dorien Petri, Margreet Luinge, Annelies Kassenberg, Klaas van Veen, and Eddie Denessen*
	Introduction Classrooms are becoming increasingly culturally diverse, and insufficient cultural responsiveness in education can contribute to unequal opportunities. To promote equity, educational approaches are needed that acknowledge, value, and build on diversity. One such approach is Culturally Responsive Teaching (CRT) (Gay, 2010), which views diversity as an asset. CRT draws on students' cultural backgrounds to enhance engagement and academic achievement, thereby promoting educational equity (Banks et al., 2005). Implementing CRT requires teachers to know their students, their families, and the communities in which they live. In addition, CRT requires teachers to actively use this knowledge in their teaching. For example, integrating diverse cultural backgrounds into their lesson content and adapting teaching instructions to culturally diverse students' learning needs. Teachers experience challenges in utilizing cultural knowledge effectively (Brown et al., 2018; Powell et al., 2016; Samuels, 2018). Although CRT is theoretically well-founded, there is limited insight into how and for what purposes teachers apply it in practice and where they encounter challenges. This study therefore examines how, and for what purposes, teachers integrate cultural knowledge into their instructional practices to promote equity, as well as the challenges they experience. Methodology We conducted an explorative qualitative study (Merriam & Tisdell, 2015), guided by the qualitative research cycle of Hennink, Hutter, and Bailey (2020). Semi-structured interviews were held with twenty-eight teachers from seventeen primary schools in the Netherlands during the 2024–2025 school year. The twelve domains of cultural knowledge identified by Petri et al. (2025) provided the theoretical framework. Data analysis followed the steps of thematic analysis—open, axial, and selective coding (Braun & Clarke, 2021)—using both inductive and deductive approaches. In parallel, we are exploring established CRT frameworks to identify an overarching theoretical model to guide the final analysis. Coding was conducted collaboratively, and intercoder reliability was assessed using Krippendorff's (2019) cu-alpha. Results Preliminary findings indicate that teachers actively use their knowledge of students' cultural backgrounds to tailor instruction to the classroom context. Examples include integrating students' home languages into assignments, acknowledging religious and cultural identities during class discussions, and inviting students to share expertise—such as explaining the Arabic language, Chinese New Year, or demonstrating a cultural skill or instrument. Teachers use cultural knowledge to create a sense of belonging for students and parents, strengthen teacher–student relationships, and increase motivation. Teachers also report several challenges: limited time and/or knowledge to integrate cultural knowledge into existing curricula, difficulties addressing value differences between teachers and parents, and discomfort in making certain topics openly discussable in the classroom. Many teachers express a desire for additional knowledge and practical skills.

	Discussion Cultural knowledge manifests in varied ways in classroom practice and is used by teachers with multiple intentions. Strong partnerships with parents are essential for creating a safe and inclusive school environment; however, teachers often struggle to collaborate with parents. The study highlights a need for more concrete tools, examples, and professional supports that help teachers translate CRT principles into everyday classroom practice and thereby promote equity. *Keywords:* • *Cultural knowledge* • *Culturally responsive teaching* • *Primary school* • *Teacher practices* • *Qualitative research*
13:30 h	**1B Paper presentation, Ruppert 111**
Chair	*Simone van der Maeden*
	***Presenter*: Fenny van Daalen-Visscher** *Discussant:* Marloes van Roon; Petrie van der Zanden **Title: Beginning primary school teachers' work characteristics related to well-being and intention to quit.** *Authors: Fenny van Daalen-Visscher, Hanke Korpershoek, Matthijs Warrens, Thibault Coppe*
	A prominent cause for teacher shortages is attrition. From previous research we know that working conditions play an important role in mitigating or causing attrition, that well-being is negatively related to attrition in the teaching profession and that varying combinations of work characteristics can predict well-being. In order to find new leads to retain beginning primary school teachers for the profession, we studied the relation between their experienced work characteristics, well-being and intention to quit. We used the job demands-resources model to shed light on this, and related a comprehensive set of experienced resourceful and demanding work characteristics of beginning primary school teachers to well-being at work and intention to quit. Research questions: 1. To what extent are work characteristics experienced as job demands and/or job resources by beginning primary school teachers? 2. To what extent are these job demands, job resources, and their interactions related to teacher well-being at work and intention to quit the teaching profession? 3. To what extent does well-being at work mediate the relationships between job demands and job resources and intention to quit? We developed a questionnaire for beginning primary school teachers (n=248) that captured a comprehensive set of experienced job demands and job resources, as well as teachers' levels of well-being and intention to quit. Using moderated mediation analysis conducted within a path model, we found that our included job resources were endorsed more strongly than our included job demands. The included job resources were associated with well-being and indirectly, through well-being, to intention to quit. The included job demands were associated with

	intention to quit but not with well-being. We also found that interactions between job demands and resources mitigate the main effects of job demands and resources on well-being and intention to quit. *Keywords: Beginning teachers, Primary education, Induction*

14:00 h	**1B Paper presentation, Ruppert 111**
Chair	*Simone van der Maeden*
	***Presenter*: Marloes Roon** *Discussant:* Dorien Petri; Tim Mainhard **Title: Towards a better understanding of memory in the context of education: telling the stories of elementary teachers' support of students' memory** *Authors: Marloes van Roon, Dineke Tigelaar, Linda van den Bergh en Wilfried Admiraal*
	Teachers' instructional actions have a substantial influence on their students' memory. We know that beliefs influence actions, yet we have little knowledge of teachers' beliefs regarding memory. We wanted to deepen our understanding of teachers' perspectives and their support for students' memory to gain more insight into how teachers adjust their instructional actions. Therefore, we interviewed 15 elementary school teachers using Goal Systems Representation (GSR) to elicit their concrete instructional actions, goals, and beliefs. We crafted stories based on teachers' interviews to deepen our understanding of how they perceive supporting students' memory. We present teachers' conceptualisation of memory through their (visual) descriptions of memory and their stories on which activities they use to support their students' memory and why. We hope that teachers' perspectives can inform future research and better support teachers in their quest to enhance their students' memory. *Keywords: Elementary teachers, conceptualization of memory, Goal Systems Representation (GSR), beliefs, and crafted stories*

Abstracts 16 April, 1C Paper presentations

14:00 h	**1C Paper presentation, Ruppert 114**
Chair	*Christa Krijgsman*
	***Presenter*: Geerte Holwerda** *Discussant:* Manjie Zhu; Paulien Meijer **Title: "Throw them in at the deep end," Characteristics of Mentoring Practices During Secondary School Internships** *Authors: Geerte Holwerda-van den Berg*
	Mentoring during the secondary school internship could be viewed as a possible reciprocal learning environment that can deepen professional learning of both parties. In this qualitative exploratory study aims to identify opportunities for reciprocal learning between mentors and mentees about PCK within existing practice. The goal system laddering interview method was applied to 20 secondary school history pre-service teachers and their school-based mentors to gain insight into their mentoring activities, the underlying goals and beliefs, and the role of the professional dialogue about PCK. Feiman-Nemsers (1989) conceptual orientations on teacher education served as a lens for understanding these mentoring practices. The findings show that most mentors and mentees combine a practical and personal orientation towards teacher education. The technological orientation is present to a lesser extent, and the academic and critical social orientations are almost absent. Mentoring activities primarily focus on enacted lessons rather than on lesson design. Although dialogue concerning PCK does take place, the emphasis

	in mentoring practice lays on general guidance. Co teaching, co designing, and discussing students' work are examples of activities that stimulate dialogue about PCK and offer opportunities for reciprocal learning within the mentoring dyad. *Keywords: Mentoring pre-service teachers* *Secondary school internship* *Pedagogical Content Knowledge* *Conceptual orientations on teacher education* *Goal systems*
14:30 h	**1C Paper presentation, Ruppert 114**
Chair	*Christa Krijgsman*
	***Presenter*: Manjie Zhu** *Discussant:* Geerte Holwerda; Paulien Meijer **Title: Perceived Teacher education Demands and Resources and burnout among Low-SES Pre-service Teachers: Multilevel Person-Centred Approach** *Authors: Manjie Zhu*, Ridwan Maulana, Michelle Helms-Lorenz,Xiangyuan Feng*
	Teacher burnout has been a global concern across educational systems around the world. Using the Job Demands–Resources (JD–R) model this study focusses on Low socioeconomic status (Low-SES) pre-service teachers. We examined the variation in demand–resource profiles at both the individual and institutional levels, and how the identified profiles are associated with different levels of burnout. Data were collected from 2,080 Low-SES pre-service teachers in China. Participants reported perceived teacher education demands and resources, as well as personal resources. Using multilevel latent profile analysis, four individual-level profiles emerged: 1) low-resource/medium-demand; 2) medium-resource/medium-demand; 3) medium-resource/high-demand; and 4) high-resource/low-demand. Teacher education demands had a more salient influence than resources in distinguishing burnout levels. At the institutional level, two profiles were identified: 1) low-demand environment and 2) mixed-demand environment, with the latter associated with higher burnout. These findings highlight the potential need for enhanced institutional supports to promote equitable and sustainable teacher preparation. *Keywords: Burnout, Low-SES, pre-service teachers, JD-R, Multilevel latent profile analysis*
13:00 h	**1C Paper presentation, Ruppert 114**
Chair	*Paulien Meijer*
	***Presenter*: Seher Sayin** *Discussant:* Milan van Can; Christa Krijgsman **Title: Faculty developers' perspectives on fostering adaptive expertise through faculty development** *Authors: Seher Sayin, Herma Roebertsen, Jill Whittingham, Yvonne Steinert, Diana Dolmans*
	Higher education is rapidly evolving, with declining lecture attendance, increasing interdisciplinarity, advances in artificial intelligence, and growing internationalization challenging faculty members to adapt their teaching. Faculty development initiatives - designed to enhance teaching knowledge, skills, and

	behaviours - may support the development of faculty members' adaptive expertise (i.e. the ability to deal with novel situations by applying conceptual understanding flexibly). This interpretive descriptive qualitative study explored how faculty developers perceive the role of faculty development in fostering adaptive expertise. Focus groups were conducted with 63 faculty developers across 10 Dutch universities. Participants were involved with designing or delivering a range of programs, including University Teaching Qualification (UTQ), Senior UTQ, and other faculty development initiatives. Data was analysed using reflexive thematic analysis to identify patterns in faculty developers' perspectives. The findings showed that faculty developers conceptualized adaptive expertise as the capacity to interpret teaching situations and respond flexibly using a repertoire of alternative actions, guided by understanding of how, when and why to apply them. Development of adaptive expertise was linked to faculty members' attitudes, particularly openness, confidence, and motivation, which are dynamic and shaped by experience, context, and interaction with others. Faculty development initiatives were perceived to enhance adaptive expertise through cyclical processes of experiencing, reflecting, and planning, with reflection (especially on "the why" behind actions) supporting awareness and understanding of alternative actions for tackling new situations. Beyond program design, faculty developers themselves play a pivotal role by modelling adaptive behaviours, making their reasoning explicit, staying current with educational developments, and fostering safe environments that emphasize learning instead of performing. Together, these factors highlight how faculty development programs and faculty developers jointly cultivate adaptive expertise by combining structural, interpersonal, and reflective mechanisms. *Keywords: adaptive expertise, faculty developers, faculty members, higher education*
13:30 h	**1C Paper presentation, Ruppert 114**
Chair	*Paulien Meijer*
	Presenter: **Milan van Can** *Discussant:* Seher Sayin; Christa Krijgsman **Title: "Being there together for the children, that is the right way": an exploration of teachers' commitment** *Authors: Van Can, Schaap, De Jong, Meijer*
	Met stijgen van het lerarentekort dat in het verschiet ligt, is het essentieel dat schoolleiders en HR-medewerkers weten waaraan hun personeel zich committeert in hun werk. Het commitment van leraren is gerelateerd aan hun intentie tot uitstroom (Moodie, 2025), welzijn (McInerney et al., 2015) en leerlingresultaten (Park, 2005). Volgens de commitment system theory (CST; Klein et al., 2022) hebben leraren meerdere commitments tegelijkertijd die met elkaar verbonden zijn, waarbij bepaalde commitments een leidende rol hebben in het systeem. Dit perspectief biedt de mogelijkheid om de psychologische structuur te verkennen die ervoor zorgt dat leraren gedreven en gemotiveerd zijn. Deze studie onderzoekt hoe leraren de verschillende commitments die ze hebben beleven, hoe bepaalde commitments leidend zijn in hun systeem en welke contextuele factoren hun commitmentsysteem verstoren. Hiervoor zijn 15 leraren in het primair en voortgezet onderwijs en het middelbaar beroepsonderwijs

	geïnterviewd op semigestructureerde wijze. Tijdens de interviews werd gevraagd aan welke onderdelen van het leraar gecommitteerd was (bijvoorbeeld de leerlingen of de collega's), hoe ieder commitment zich uitte en met welke reden de leraar het commitment had. De interviews zijn geanalyseerd door de interviews per commitmentdoel op te delen en te coderen met behulp van een codeboek. Uit de gesprekken blijkt dat een aantal commitments voor meerdere leraren belangrijk zijn, waarvan de leerlingen door iedere deelnemer wordt benoemd. Leraren zien het als hun primaire taak om goed onderwijs te verzorgen en het welzijn van de leerlingen te bewaken. Hiervoor zijn velen bereid om eigen tijd te investeren. Commitment naar de collega's en de school waar iemand werkt, komen ook vaak terug. Deze commitments worden deels gehouden uit respectievelijk collegialiteit en goed werknemerschap, maar deels ook om ervoor te zorgen dat het onderwijs aan de leerlingen van goede kwaliteit is. Daarnaast lijken leraren naast het commitment naar de leerlingen soms ook een andere invloedrijk commitment in hun systeem. Deze worden aangenomen uit andere overwegingen dan goed onderwijs, bijvoorbeeld persoonlijke ontwikkeling of loyaliteit aan het schoolbestuur. Dit laat zien dat het commitment naar de leerlingen belangrijk is voor leraren, maar dat andere commitments ook een belangrijke rol spelen in de dagelijkse praktijk van leraren. Door hier op in te spelen kunnen schoolleiders en beleidsmakers hun personeel duurzaam aan zich binden. *Keywords: commitment system, teacher commitment, teacher retention*

Abstracts 16 April, 1D Round Table discussions

14:00 h	**1D Round Table, Ruppert 032**
Chair	*Ellen Kok*
	***Presenter*: Lauren Beehler** *Discussant:* Gillian Saunders-Smits **Title: Triangulating learning processes for educational videos: evaluating process measures and self-report measures.** *Authors: Lauren A. Beehler, Ellen M. Kok, Anouschka van Leeuwen, Jeroen Janssen*
	While learning from educational videos, students monitor their understanding of the material and their attentional engagement, and use that information to regulate their behavior. Students can use playback controls (e.g., pause, jump, adjust speed) to regulate their learning and attention, but the reason behind their use is varied, and more subtle forms of regulation can also take place that are not captured by playback control logs. Webcam-based eye tracking could offer insight and clarification into students' use of metacognitive strategies. This two-part study will evaluate whether eye tracking can be used to reveal information about students' monitoring of attention and understanding, and if it can help differentiate between metacognitive strategies enacted with playback controls. The first study will be set in the lab with a small sample of participants. These participants will watch educational videos, then be tested on their understanding of the video's content and asked to rate their attention and judgments of learning. Participants will be shown a playback of their gaze movements, recorded by lab-based eye tracking, and asked to talk through their thought processes, especially around their use of playback controls. They will also be shortly interviewed about their monitoring and regulation of attention and learning, and asked any clarifying questions about their

	gaze-cued retrospective think-aloud. The data gathered in the lab-based study will be used to identify patterns in gaze data and playback controls that correspond with students' metacognitive monitoring and control. Furthermore, the relationship between the post-video attention and judgment of learning ratings will be investigated. The first study will be followed by a similarly-structured remote study, sans retrospective think-aloud and interview, with a larger sample size to evaluate these patterns' generalizability and reliability. *Keywords: Eye tracking, video learning, learning process, process measures, metacognition, learning analytics, video-based learning, computer-based learning, human-computer interaction*
14:30 h	**1D Round Table, Ruppert 032**
Chair	*Ellen Kok*
	***Presenter*: Mary-Jo Diepeveen** *Discussant:* Omid Noroozi **Title: Instructional Guidance for Student Interaction with Conversational AI in Higher Education: A Scoping Review** *Authors: MJ Diepeveen, Dr. D. Scholten, Dr. H. Westbroek, Prof.dr. J. van Muijlwijk*
	This round table centres on the coding of a scoping review that maps how instructional guidance for student interaction with conversational AI has been designed and studied in higher education. A recurring observation in the empirical literature is that studies frequently treat ChatGPT as a black-box intervention, reporting on its use and downstream learning outcomes without documenting the instructional conditions under which students engaged with the tool. This is problematic: without adequate guidance, students risk defaulting to completing tasks with AI rather than using it to support their own learning, and under-scaffolded AI use may undermine rather than support learning outcomes. At the round table, we will work with a ChatGPT-focused subsample to discuss and refine a coding scheme structured around four dimensions of generative AI literacy (Know, Use, Evaluate, and Ethics), and invite experts to reflect on how underreporting of guidance should be captured and what minimum reporting standards the field should adopt for studies involving AI tools as instructional interventions. *Keywords: generative AI, conversational AI, ChatGPT, instructional guidance, higher education, scoping review, student-AI interaction, AI literacy, executive help-seeking, instructional design, learning outcomes*
13:00 h	**1D Round Table, Ruppert 032**
Chair	*Omid Noroozi*
	***Presenter*: Els Goetschalckx** *Discussant:* Ellen Kok **Title: Building blocks for digital participation: An EDR study on social skills and media literacy in 6-7-year-olds** *Authors: Els D.S. Goetschalckx, Lysanne S. Post, Ina M. Koning, Eddie J.P.G. Denessen, and Nadira Saab*
	Digital media play an increasingly important role in the daily lives of young children. For 6- to 7-year-olds, media use is not only a source of entertainment but also an important context for social interaction.

	It's important that children learn to reflect on their own media use and engage in discussions with parents, teachers, and peers. This can help prepare them for using media prosocially in later digital participation. This applies to interactions during joint media engagement as well as online interactions with acquaintances or new contacts. In this study, we develop and evaluate an intervention focused on developing social skills which are important for social interactions in the "real" world and for (future) digital interactions. The learning objectives align with frameworks around (digital) citizenship and media literacy. The main research question is: How can an educational program for 6-7 year-olds contribute to the development of social skills essential for respectful and safe participation in and with digital environments? To answer this question, we use educational design research. This research method consists of three phases: (1) Analysis and exploration, (2) Design and development, (3) Evaluation and reflection. During the first phase, we aim to refine the problem definition. This will provide insights into the needs, context, and learning objectives of the program. We will achieve this through a literature review, interviews with teachers, and focus groups with parents. The results of this phase are not available at the time of writing, but initial results and what this means for the design and development phase will be discussed during the ICO Graduate Spring School. *Keywords: Educational Design Research - Media Literacy - Social Development*
13:30 h	**1D Round Table, Ruppert 032**
Chair	*Omid Noroozi*
	***Presenter*: Lotte Schreuders** *Discussant:* Ellen Kok **Title: Experts' consensus on the ways generative AI can support teachers' pedagogical reasoning** *Authors: Lotte Schreuders, Natalie Pareja Roblin, Bieke Schreurs and Monique Volman*
	The rapid rise of generative AI (GenAI) in higher education raises urgent questions about how these tools may become part of the unseen thinking processes that underpin teachers' practice. As part of a broader scholarly movement in the 1980's, Shulman (1987) introduced his theory on pedagogical reasoning and action to describe such unseen aspects of teachers' practice. In this study, we draw on an integrated conceptualization of pedagogical reasoning, through which teachers respond to triggers from their context by drawing on their knowledge, experiences and beliefs to interpret these triggers, consider multiple options, and articulate the reasons underpinning their instructional decisions. While studies show teachers' also draw on external resources during these processes, little is known about how GenAI tools may support the mechanisms of pedagogical reasoning. Across two rounds within a qualitative Delphi design, an individual semi-structured interviews followed by an expert panel discussion, this study seeks to uncover experts' perspectives on the ways that GenAI can support the process of pedagogical reasoning, as well as opportunities and risks that accompany these uses. During this roundtable, we will discuss the structure of the questions and activities in both

	Delphi rounds, with the aim of informing the further development of my data collection instruments. *Keywords: Pedagogical reasoning; generative AI; qualitative Delphi study*

Abstracts 16 April, 2A Poster presentations

15:30 h	**2A-1 Poster Presentation, Ruppert 031**
Chair	*Jorn ten Brink*
	***Presenter*: Elske Brouwer-Schudde** *Discussant:* Lisette Hornstra **Title: Teacher Efficacy and Student Sense of Belonging** *Authors: Elske Brouwer-Schudde*
	Inclusive education, as articulated in international frameworks such as the UN Convention on the Rights of Persons with Disabilities (2006) and the UNESCO Salamanca Statement (1994), emphasizes diversity as enrichment and asserts the right of all students to full participation and sense of belonging. While inclusion has historically progressed from physical integration to social participation, participation alone does not guarantee a genuine sense of belonging (SoB). Belonging, defined as students' subjective feelings of connectedness, acceptance, and recognition, is both a prerequisite and an outcome of meaningful inclusion. Teacher–student relationships, peer interactions, and school culture are central to fostering SoB, particularly for students with additional support needs. Despite ambitious policies, including the Dutch commitment to a fully inclusive education system by 2035, students with support needs continue to report lower levels of peer acceptance and participation, underscoring persistent relational gaps. This study investigates how teachers perceive and enact their role in cultivating inclusive classroom climates that promote belonging. It focuses on Teacher Self-Efficacy (TSE) and Collective Teacher Efficacy (CTE) as critical levers for inclusive teacher behavior. TSE reflects individual confidence in fostering belonging, while CTE captures shared beliefs in a team's capacity to positively influence student outcomes. This research consists of two substudies: a quantitative survey of Dutch primary school teachers with qualitative focus groups. The survey maps current levels of TSE and CTE, while the focus groups explore relational and contextual factors shaping efficacy. By identifying promoting factors at both individual and collective levels, the study aims to inform professional development and school-wide strategies that strengthen inclusive teacher behavior. Ultimately, it contributes to building inclusive classrooms where all students experience sense of belonging as a fundamental human need. *Keywords: teacher self-efficacy, collective teacher-efficacy, student sense of belonging, inclusive education, inclusive teacher behavior.*

15:30 h	**2A-1 Poster Presentation, Ruppert 031**
Chair	*Jorn ten Brink*
	Presenter: **Lotte van Kesteren** *Discussant:* Lisette Hornstra **Title: Effective Study Strategies: What Do Primary School Students, Teachers, and Parents Believe?** *Authors: Lotte van Kesteren, Vincent Hoogerheide, Barbara Flunger & Tamara van Gog*
	Homework is an important part of students' academic lives, yet time spent on homework is often not correlated with learning or achievement, especially in primary school. Reasons for this limited effectiveness might be that students engage in ineffective study behaviors. For example, high school and university students often prefer ineffective study strategies (e.g., rereading) over effective ones (e.g., practice testing). However, studies examining study strategy behavior in primary education remain scarce. Moreover, teachers and parents may inadvertently shape students' (in)effective study behaviors through their involvement. Thus, it is important to consider their knowledge about study strategies as well. This study examined the study strategy beliefs of primary school students, their teachers, and their parents. A total of 38 classes with 38 teachers, 428 students, and 408 parents were surveyed. Participants were asked to rate study strategies for four different learning scenarios on a scale from 1 (never) to 3 (always) for perceived usability and perceived effectiveness. This study is expected to contribute to a better understanding of the use of study strategies in (Dutch) primary school students' homework. Findings may provide guidelines for enhancing homework practices.
15:30 h	**2A-1 Poster Presentation, Ruppert 031**
Chair	*Jorn ten Brink*
	Presenter**: Claudia Gomes** *Discussant:* Michiel Veldhuis **Title: Cracking the code: Exploring the development of student identity during the transition to higher education** *Authors: Claudia Gomes, Ellen Klatter, Marieke Meeuwisse, Sabine Severiens*
	The transition to higher education is a critical period in which students undergo significant personal, social, and academic changes. This qualitative study explored how student identity and its centrality develop during this transition, with a focus on first-year students attending an urban university of applied sciences in the Netherlands. Drawing on semi-structured interviews with sixteen participants from diverse backgrounds, the study applied reflexive thematic analysis to explore the factors that contributed the shaping and internalisation of their student identity. The findings show that a student identity emerges through student identity perceptions, social engagement and recognition, academic acculturation, self-regulated learning, and internalisation of the student role. The extent to which being a student becomes a core part of one's self-concept, in other words their Student Identity Centrality, varies across individuals and is closely linked to prior experiences, other current roles, and alignment with student values. These findings contribute to transition theory by highlighting the dynamic and context-dependent nature of identity development during the transition to higher education, and

	underscores the importance of fostering a supportive environment that promotes student identity development. *Keywords: student identity, student identity centrality, transition, higher education*
15:30 h	**2A-1 Poster Presentation, Ruppert 031**
Chair	*Jorn ten Brink*
	***Presenter*: Christos Palidis** *Discussant:* Michiel Veldhuis **Title: Strengthening human centricity in Industry through learning** *Authors: Christos Palidis; Renate Wesselink; Yvette Baggen; Pablo Morales*
	Algorithm technologies of Industry 4.0, such as artificial intelligence (AI), can assist industrial firms optimize their processes and become more sustainable. However, as a result of the technocentric nature of Industry 4.0 (I4.0), several challenges for industrial employees emerged. Industrial firms of I4.0 can achieve their goals for sustainable manufacturing by strengthening Human centricity (HC) through an organizational learning culture (OLC). *Keywords:*
16:00 h	**2A-2 Poster Presentation, Ruppert 031**
Chair	*Sara de Bruin*
	***Presenter*: Justine Griffioen** *Discussant:* Ellen Kok **Title: Observation systems for linguistic aspects of teacher-student interactions in the kindergarten classroom: a systematic literature review** *Authors: Justine Griffioen*
	Language development is a crucial part of children's general development. The ability to understand and use language is essential for communication, cognitive skills and social-emotional growth. An important milestone within children's language development is the transition to primary school. During the kindergarten years, children's language competencies will be further developed. Teachers play a crucial role in stimulating the language development of children within the kindergarten classroom. Classroom observations are often used to study teacher-student interactions in a school context. Observation can provide us with invaluable insights into everyday teacher-student interactions within their natural context. A systematic review focusing specifically on the observation of the linguistic aspects of the interaction seems to be lacking. During this poster session I will thus present (tentative) results of my systematic review, which aims to present an overview of the available coding schemes for observing linguistic aspects of teacher-student interactions in the kindergarten classroom from video recordings. Moreover, the different foci of these instruments will be compared and in which settings they can be applied. This way, researchers and educational professionals can use the outcomes in order to make a well-informed decision for a specific coding scheme that suits their specific research goals or educational needs. During the poster session, I hope to discuss with the audience in which ways the results can best be presented within the article.

	Keywords: Systematic literature review, observation systems, teacher-student interactions, language development, kindergarten
16:00 h	**2A-2 Poster Presentation, Ruppert 031**
Chair	*Sara de Bruin*
	***Presenter*: Simone van der Maeden** *Discussant:* Ellen Kok **Title: How a primary school teachers stimulates students' mathematical attitude: A case study** *Authors: Simone van der Maeden, Michiel Veldhuis, Michiel Doorman, Arthur Bakker*
	A new core goal about mathematical attitude development is currently being implemented in Dutch primary education. However, there is a lack of educational approaches aimed at stimulating students' mathematical attitude development. As teachers can play an important role in students' attitude formation, we decided to focus on teachers' professional development. In the present study, we investigated how one primary school teacher, Jan, designed educational activities aimed at stimulated his students' mathematical attitude development in the context of a professional learning community. The professional learning community consisted of six teachers who taught in different grades and came together six times during one school year. On the basis of the results of our thematic analysis of various qualitative data sources, we describe Jan's knowledge about and vision on mathematical attitude, and the what and why of Jan's design. Our findings indicate that Jan translates his own knowledge of mathematical attitude into concrete educational activities, in which he centralizes mathematical problems which allow for uncertainty and are connected to real-world contexts. *Keywords: Mathematical attitude, Professional learning community, Primary education, Case study*
16:00 h	**2A-2 Poster Presentation, Ruppert 031**
Chair	*Sara de Bruin*
	***Presenter*: Tycho Onderstijn** *Discussant:* Gilian Saunders **Title: Creativity in Moment-to-Moment Interactions During Kindergarten Science Lessons: Changes Associated with an Intervention on Scientific Reasoning** *Authors: Tycho Onderstijn, Marijn van Dijk, Elisa Kupers, Astrid Menninga.*
	Creativity is commonly defined as the production of ideas or products that are both novel and appropriate within a given context. Novelty refers to originality, whereas appropriateness captures usefulness, value, or relevance to the task or domain at hand. Mini-c creativity is defined as the novel and personally meaningful interpretations of experiences, actions, and events. Mini-c creativity is directly observable in real-time classroom talk rather than in final products. We re-analysed 30 pre- and post-intervention video-recorded science lessons from the Language as Tool project to address three research questions: how do teachers' convergent and divergent teaching strategies differ before and after participating in an intervention focused on children's scientific reasoning; how does children's creative behavior differ before and after an intervention focused on scientific reasoning skills; and how do changes in teachers' divergent teaching behaviour relate to changes in the

	attractor landscape of teacher-student interactions. Student novelty and appropriateness were each coded on a three-point ordinal scale. Teacher utterances were coded using an ordinal scale of openness and combined into three categories: neutral, convergent, and divergent. An Integrated Creativity Index was created to examine the interplay between novelty and appropriateness in children's creative behavior, prioritizing appropriateness as a baseline requirement. State Space Grids were used to capture the moment-to-moment dynamics of teacher–student interactions on a 3 × 4 grid representing twelve possible interaction states. Comparisons of attractor duration, dispersion, and flexibility were made between pre-intervention and post-intervention lessons. Analysis is currently ongoing. *Keywords: Creativity, Teacher-student interactions, Science education, Observational research.*
16:00 h	**2A-2 Poster Presentation, Ruppert 031**
Chair	*Sara de Bruin*
	Presenter: **Bhagyashree Sailwal** *Discussant:* Gilian Saunders **Title: Exploring characteristics and transition challenges in challenge-based learning: A study of upper secondary and higher STEM education** *Authors: Bhagyashree Sailwal, Lesley de Putter, Esther Ventura Medina & Nienke Nieveen*
	The transition from secondary to higher education represents a critical phase in students' academic trajectories, particularly within science, technology, engineering, and mathematics (STEM) programmes. Beyond social adjustments, students encounter programme-related shifts in instructional approaches, assessment practices, participation norms, and expectations of autonomy. Challenge-Based Learning (CBL), increasingly implemented across both secondary and higher education, seeks to foster authentic problem-solving, collaboration, and learner ownership. Research shows considerable variation in how CBL is implemented across contexts, while systematic cross-level comparisons and analyses of students' transition experiences between secondary and higher education CBL settings remain limited. This study explores how CBL is characterised and implemented in upper secondary and higher STEM education and examines how these characteristics relate to students' transition experiences. Focusing on transitions from challenge-oriented secondary education (Technasium, Research & Design) into CBL-based higher STEM programmes, the study adopts a qualitative design situated within an Educational Design Research framework. Data include classroom observations, semi-structured interviews with students, teachers, and teaching assistants, and field document analysis across four secondary schools and two university courses. Guided by a validated Unified CBL Framework, data are analysed qualitatively. Preliminary analyses aim to illuminate continuities and discontinuities in CBL implementation across educational levels and inform design-oriented interventions to support smoother transitions.

	Keywords: Challenge-Based Learning, STEM Education, Educational Transition, Educational Design Research

Abstracts 16 April, 2B Paper presentations

15:30 h	**2B Paper presentation, Ruppert 111**
Chair	*Marieke van Geel*
	***Presenter*: Johannes Serfontein** *Discussant:* Catur Wulandari; Thijmen van Alphen **Title: Emotion Regulation in Context: An ESM Study on Achievement Emotions and Their Regulation** *Authors: Johannes C. Serfontein, Linda van Zutphen, Maartje Henderikx, Renate H.M. de Groot*
	See extended summary. *Keywords: Experience Sampling Method, Learning context, Higher education*
16:00 h	**2B Paper presentation, Ruppert 111**
Chair	*Marieke van Geel*
	***Presenter*: Catur Wulandari** *Discussant:* Irene Douwes-van Ark; Thijmen van Alphen **Title: Modified Self-Selection and System-Assigned Grouping in Multicultural Higher Education: Effects on Students' Sense of Belonging** *Authors: Catur Wulandari, Tessa L. Mearns, Nadira Saab*
	This study investigated the impact of two types of modified grouping mechanisms on university students' sense of belonging in a culturally diverse context by adding students' answers as grouping criteria to the system-led assignment and adding anonymity to the self-selection grouping mechanism. Data were collected at two time points using quantitative questionnaires and semi-structured interviews, to examine possible effects of the two grouping mechanisms on students' sense of belonging which represent by social acceptance and valued competence scale, and collaborative perceptions. Preliminary results indicate no statistically significant difference between modified system-led and modified self-selected groups in terms of sense of belonging. However, differences emerged in students' perceptions of peer support and isolation during collaboration. A strong positive correlation between intra-team psychological safety and social acceptance, suggesting that relational climate within teams may be more influential than the grouping structure itself. These findings suggest that thoughtfully structured versions of both system-assigned and self-selection approaches can support belonging in multicultural classrooms, while highlighting the central role of psychological safety in collaborative learning environments. *Keywords: group formation, sense of belonging, collaborative learning, higher education, psychological safety*

16:30 h	**2B Paper presentation, Ruppert 111**
Chair	*Thijmen van Alphen*
	***Presenter*: Irene Douwes-van Ark** *Discussant:* Johannes Serfontein; Marieke van Geel **Title: University teaching for student engagement: insights from teachers' perspectives, teaching behaviour and students' perceptions** *Authors: Irene Manja Elisabeth Douwes-van Ark, Marjon Fokkens-Bruinsma, Jan Folkert Deinum and Hanke Korpershoek*
	Engaged students have better learning experiences and outcomes, but the university context can be a challenging environment for teachers to facilitate student engagement. In this multiple case study we give insight into university teaching for student engagement to support teachers' didactical development. We interviewed 13 university teachers to understand what perspectives they have on student engagement (definition, teaching practices and determining factors). After a thematic analysis, our interview data demonstrate that teachers have different perspectives on what student engagement is, though mostly focus on behavioural engagement. They adopt diverse teaching practices, such as interacting and having clear expectations for students. Teaching large student groups or lack of time or staff determine their teaching, amongst other factors. Using a four-case comparison table, we further explored the interplay of teachers' perspectives (teacher interview), their teaching behaviour (classroom observation) and students' perceptions (student survey). We found (mis)alignments and discuss possible explanations, such as the need to support students in taking responsibility for their engagement and (the lack of) the teacher's or students' interest for the course content. To support teachers in their didactical development for student engagement, there is a need to help teachers understand what the concept entails. Different teaching practices can promote student engagement. Teachers need to receive support, time and resources to develop their teaching strategies, especially in large classes or lectures, taking their specific context into account. *Keywords: multiple case study; student engagement; higher education; university lecturers; active learning; thematic analysis; case comparison table*

Abstracts 16 April, 2C Paper presentations

15:30 h	**2C Paper presentation, Ruppert 114**
Chair	*Harmen Schaap*
	***Presenter*: Sybolt Friso** *Discussant:* Eleanor Rowan; Max Kusters **Title: The professional significance of subjectification: exploring the interactional presence of the teacher-as-a-self through the pedagogy of subjectification** *Authors: Sybolt Friso, Saro Lozano Parra, Marije van Braak, Cok Bakker, Rick de Graaff*
	The pedagogical purpose domain of subjectification concerns encouraging students to be a self, while they encounter a pluriform world of others. However, it leaves remarkably ambiguous how teachers are concretely involved in subjectification during their everyday practice. Addressing this lacuna, we introduce teacher subjectification as an analytical perspective on how a teacher-as-a-self interactively

	constitutes student subjectification. Through conceptual argumentation and an exploratory vignette, we argue that teacher subjectification prompts professionally significant existential considerations about teaching, mirroring the pedagogical significance of student subjectification. Our conceptual argument explores the theoretical intertwinement of teacher subjectification and student subjectification through the key subjectification-related concepts 'natality' , plurality' , and 'risk' . Our exploratory vignette of a real-world classroom situation illustrates these theoretical insights. Looking ahead, we present practical ways of applying teacher subjectification to surface existential-pedagogical considerations within everyday teaching; we list our study's theoretical implications about subjectification; and we recommend further empirical explorations of teacher subjectification. *Keywords: Subjectification, Teacher subjectification, Educational purposes, Pedagogy, Biesta*
16:00 h	**2C Paper presentation, Ruppert 114**
Chair	*Max Kusters*
	***Presenter*: Ilona Fassaert** *Discussant:* Sybolt Friso; Harmen Schaap **Title: Motor competence and sport identity as antecedents of children's peer network in physical education and the classroom: A social network analysis** *Authors: Ilona M.M. Fassaert, Isabel Raabe, Sybren van Hall, John van der Kamp, Anne G.M. de Bruijn*
	Introduction: Whether in the classroom or in physical education (PE), children's daily school experiences are shaped by their peer relationships, which are crucial for social, emotional, and academic development. Although children's positions within peer networks differ across school contexts, little is known about how context-specific competencies and identities influence these networks in primary school. To address this gap, this study examines whether motor competence (MC) and sport identity predict children's collaborative peer networks in PE and the regular classroom. Methods: Data were collected from 320 children (ages 6–11) across 20 primary school classrooms in the Netherlands. Children reported their preferred collaboration partners in PE and in the classroom using peer nominations. Motor competence was assessed with the KTK3+ test battery, and sport identity was measured with the Athletic Identity Measurement Scale. Social network analyses were conducted in R, including descriptive statistics, network visualizations, and multiplex exponential random graph models (ERGMs). Results: Preliminary descriptive analyses and network visualizations indicate differences between collaborative peer networks in PE and in the classroom, suggesting that children collaborate with different peers across contexts. The influence of motor competence and sport identity on these collaboration patterns is currently being examined using multiplex ERGM analyses. Conclusion: These initial findings highlight the importance of understanding context-specific predictors of peer relationships in primary school. The first outcomes of the multiplex ERGM analyses will be presented during the conference presentation. *Keywords: Peer networks, social network analysis, motor competence, sport identity, children*

16:30 h	**2C Paper presentation, Ruppert 114**
Chair	*Max Kusters*
	Presenter: **Eleanor Rowan** *Discussant:* Ilona Fassaert; Harmen Schaap **Title: We are a "hockey family": Perspectives on Support for Adolescents' Interests** *Authors: Rowan, E., Wansink, B. J., Volman, M., Akkerman, S.*
	Through pursing their interests, adolescents gain knowledge, skills and a sense of who they are and who they want to be. However, they do not pursue these interests alone, and parents or caregivers can play an important role, supporting their child's interests across multiple dimensions. Research often focusses on the support itself, which can include epistemic support, provision of resources, and more emotional support. However, this does not incorporate the level of parents' own views and reasons, which can affect the support they provide and how the effect this has on their child and their child's interest pursuits. In the current study, we investigate parents' perspectives in relation to the interests they support their child in, and the ways in which these are reflected in adolescents' own narratives about their interests. We interviewed 18 adolescents and their parents about the adolescent's two most important interests, and demonstrate that parents express many perspectives and considerations in relation to the ways in which they support their child's interests. Parents appraise their child's interests in all their complexity, are aware of and weigh up their investments, have their own goals for their child, and these perspectives and considerations are positioned relative to their own interests. Furthermore, these four themes are reflected in adolescents' narratives in varying ways. *Keywords: interests, norms and values, parenting, support*

Abstracts 16 April, 2D Paper presentations

15:30 h	**2D Paper presentation, Ruppert 116**
Chair	*Marjolein Deunk*
	Presenter**: Wenyi Chu** *Discussant:* Sarah de Vries; Marjon Fokkens-Bruinsma **Title: Toward frameworks for emotions in wicked engineering problems: An exploratory study** *Authors: Chu, W.*
	Abstract: Engineers are required to engage with wicked problems that are ill-defined, value-laden, and solution-resistant. Although engineering education research has increasingly acknowledged the importance of emotions for students to deal with wicked problems, insights on how students can navigate their emotional experiences remain limited. To address this gap, this study adopts an interactionist perspective. Semi-structured interviews were conducted with thirty engineering students and education practitioners at a Dutch University of Technology to investigate their lived experiences. Narrative inquiry informed the theoretical grounding and supported an iterative analysis that moved between literature and empirical insights. The findings indicate that students' emotional experiences in relation to wicked problems can be organized into four overarching dimensions. In addition, seven

	interrelated emotional competencies emerged as key themes for engaging with these challenges. Together, these results constitute a coding framework for analyzing situated emotional experiences for engineering students when facing wicked engineering problems, grounded in interactionist conceptions of emotion. This paper outlines the development and structure of this framework. An ongoing doctoral study applied it to map out the main challenges students encounter when facing wicked problems in their studies. Future research may further validate and adapt this framework across varied educational settings and examine how emotional competencies shape students' interpretation, ethical decision-making, and sustained engagement with complex societal challenges. Case studies could deepen understanding of how students' emotions and cognition co-evolve within engineering education contexts. *Keywords: Capturing Students' Emotions and Emotion Competencies in Wicked Problems Learning: An Interactionist Study*
16:00 h	**2D Paper presentation, Ruppert 116**
Chair	*Marjon Fokkens-Bruinsma*
	***Presenter*: Sarah de Vries** *Discussant:* Wenyi Chu; Marjolein Deunk **Title: Developing boundary-crossing competence in a transdisciplinary mixed classroom: a case study** *Authors: Sarah de Vries MSc, associate professor dr. Judith Gulikers, professor dr. Perry den Brok*
	Abstract Higher education needs to prepare students and professionals for addressing real-world, wicked problems. A transdisciplinary mixed classroom where students and professionals act as co-learners in a university course focusing on health and sustainability is the context of this study. The purpose is to find out whether and how such a course can contribute to the development of boundary-crossing competence as key competence for transdisciplinary professionals. Through a case study approach, this study investigated what course elements supported boundary-crossing development in this transdisciplinary mixed classroom. The intended, implemented and attained curriculum representations were studied via a range of data sources and analysed using the curricular spiderweb and impact levels. Professionals and students indicated they developed their boundary-crossing competence and achieved high impact levels. Still, results showed that boundary crossing was only explicated in a small number of course aspects. This suggests there is room for improvement in terms of more explicitly addressing boundary crossing in the transdisciplinary mixed classroom. This paper reports a study on boundary-crossing competence development in a transdisciplinary mixed classroom in the context of sustainability. To the best of our knowledge, this has never been done before. There are papers about transdisciplinary mixed classrooms , but they do not link this type of learning environment to boundary-crossing competences. In addition, considering the learning environment through the lens of representations and the spiderweb is an innovative approach. *Keywords: Keywords: transdisciplinary, competency-based education, higher education institutes, educational innovation, learning and teaching strategies*

Abstracts 16 April, 2E Round Table discussions

15:30 h	**2E Round Table, Ruppert 032**
Chair	*Hanno van Keulen*
	***Presenter*: Marie Gillet** *Discussant:* Robert-Jan Korteland **Title: Exploring the Teacher Identity of Health Professions Educators** *Authors: Marie Gillet, Diana Dolmans, Eline Vanassche, Lianne Loosveld*
	In health professions education, teaching is one of several roles educators take on alongside clinical or research work. Although education research has emphasised the importance of teacher identity in the last decades, little is known about how it is experienced in the field of health professions education. The present study uses Kelchtermans' Personal Interpretative Framework to explore how health professions educators (HPEs) think about themselves as teachers and make sense of their experience and role. Semi-structured interviews with 13 participants (n=13) currently teaching at Maastricht University and/or at the MUMC+ university hospital based on the PIF framework allowed to approach HPEs' teacher identity on varied aspects, and thus a rich narrative analysis of these educators' professional stories. *Keywords: teacher identity, qualitative research, clinician-teachers, medical education*
16:00 h	**2E Round Table, Ruppert 032**
Chair	*Robert-Jan Korteland*
	***Presenter*: Frouke de Wijs** *Discussant:* Hanno van Keulen **Title: Bridging social divisions in classroom? Students' experiences with sharing their background related experiences when discussing controversial issues in classroom.** *Authors: Frouke de Wijs, Gerhard Stoel, Katerina Manevska, Paulien Meijer*
	Discussing controversial issues in the civics classroom is an essential skill for students, particularly in an era in which open dialogue across differing viewpoints can no longer be taken for granted. Because controversial issues often relate closely to students' identities and lived experiences, their personal backgrounds can be valuable sources of knowledge in these discussions. Providing space for these backgrounds may give marginalized students a stronger voice and foster mutual understanding, thereby helping to bridge social divisions within the classroom. In a previous study, we identified several pedagogical approaches teachers use when dealing with students' backgrounds in discussions on controversial issues: contextualizing, blocking, normative bridging, and emancipative bridging. We concluded that the latter two are especially used as strategies to bridge social divisions between students. Normative bridging involves teachers highlighting differences or similarities among students to promote understanding, thereby determining which aspects of students' backgrounds are brought into the discussion, which carries the risk of stereotyping. Emancipative bridging, by contrast, gives students the opportunity to share their own experiences and allows students to define their own often multifaceted backgrounds. However, little is

	known about how students themselves experience these approaches or how they relate to experienced social divisions in classroom. This study therefore focuses on students' experiences of their teachers' pedagogical strategies. This research examines how students experience sharing their backgrounds and compares how the perceived impact of normative and emancipative bridging relates to bridging or reproducing social divisions in the classroom. The study uses a qualitative approach, drawing on seven focus group discussions across five Dutch secondary 2 schools. During the round-table session, preliminary findings will be presented. The discussion will focus on the following questions: • For a given set of student quotes: to what extent are students' reflections on social divisions in classroom related to their experiences of sharing their backgrounds, and what does this say about the value of giving space to students' backgrounds? What else do you see in the quotes? • To what extent should we draw on the teacher data in relation to the research questions and what we know about the students? *Keywords: citizenship education, controversial issues, students' backgrounds, social divisions, qualitative research (focus groups)*
16:30 h	**2E Round Table, Ruppert 032**
Chair	*Robert-Jan Korteland*
	***Presenter*: Kathinka van Doesum** *Discussant:* Hanno van Keulen **Title: The development of students' vocational narratives during VE programs in the economic domain** *Authors: Doesum van K.; Zitter, I.; De Bruijn E.*
	Senior secondary vocational education in the Netherlands prepares students for vocational practice, further education, and citizenship, and includes the development of a vocational identity. Forming a vocational identity can be challenging, as many students, particularly in the economic domain, enter their programs with unclear vocational images and limited commitment. From a sociocultural perspective, vocational identity formation is a participatory process of belonging, becoming, and being, which develops through increased engagement in a vocational community, by making meaning and sense of experiences. Across multiple vocational settings, students construct personal vocational narratives that synthesize experiences over time and reflect goals, intentions, and meanings within the collective narrative of the vocational community. Because vocational identity formation is socially embedded and subjective, it is best studied from students' perspectives using narrative inquiry and longitudinal individual interviews, which require sustained researcher–participant relationships. This longitudinal multiple-case study addresses the research question: How do students in the economic domain develop vocational narratives during vocational education programs? To capture this development over time, repeated in-depth interviews are conducted with at least 10 students from 2024 through 2027. Deductive and inductive analyses identify shared themes of vocational identity, and preliminary findings confirm earlier research that many students in the economic domain enter their programs without clear vocational images or expectations.

	The round table will focus on the methodological issue of how researchers can overcome participants' tendency to emphasize recent or immediate experiences, in order to elicit broader, richer narratives that capture earlier and less prominent influences. *Keywords: narratives, qualitative research, vocational education*

Abstracts 17 April, 3A Poster presentations

13:00 h	**3A-1 Poster Presentation, Ruppert 031**
Chair	*Alice Middelkoop*
	Presenter: **Marcel Mooijman** *Discussant:* Gerhard Stoel **Title: The didactical practice of Dutch teacher educators for secondary schools** *Authors: Marcel Mooijman, Nadira Saab, Patrick Sins*
	Teacher educators play an important role in teaching didactics to preservice teachers by teaching both about and with didactics, yet research provides limited insight into how they shape this and which motives underly this. In this study, nineteen Dutch teacher educators for secondary education were interviewed and observed, 32 course manuals are analysed, and 157 Educators filled in a survey. We examined four types of didactical activities: using learning goals, presenting learning content, deploying instructional methods, and conducting evaluation. We also examined motives as undelying educational paradigms or the wish to use educational research in shaping didactics. The methods show that educators mainly focus on instructional methods: designing them, applying subject-specific didactical skills, and connecting them to educational approaches such as collaborative learning. Other activities, such as formulating learning goals or promoting learning strategies, received less attention. The observations show that educators predominantly use the conversational method, supplemented with short explanations, assignments, and presentations. Notably, they rarely make their own didactical choices explicit. Motives are mostly that educators place an accent on practical rather than theoretical teacher preparation, from a paradigm to contribute to social change in education and society, while educational research does not play a role in motivating didactics. *Keywords: Teacher education* *Teacher educators* *Higher education* *Didactical practice*

13:00 h	**3A-1 Poster Presentation, Ruppert 031**
Chair	*Alice Middelkoop*
	***Presenter*: Mylene van der Scheer** *Discussant:* Gerhard Stoel **Title: From Words to Worth: What Drives Quality in L1 Dutch Thesis Introductions?** *Authors: Mylene van der Scheer, MSc; Dr. Renske Bouwer; Dr. Jimmy van Rijt; Prof. Dr. Hugo Quené*
	Writing proficiency is central to academic success, yet producing high-quality texts remains challenging for many students, particularly in capstone tasks such as the thesis. Expectations of text quality are often tacit (Itua et al., 2014), leaving students uncertain about what constitutes 'good' academic writing. This study conceptualizes academic writing as knowledge-crafting (Kellogg, 2008), understanding advanced academic writing as the ability to simultaneously hold representations of ideas and source-texts, the produced text, and the reader. From this perspective, text quality is understood as the outcome of successful knowledge crafting, raising the question of how this construct is expressed in the text. Previous research has identified lexical sophistication, syntactic complexity, and cohesion as robust predictors of writing quality (Crossley, 2020). Other studies highlight the importance of stance features in academic writing, as these features signal the writer's (epistemic) positioning and interaction with the imagined reader (Aull & Lancaster, 2014). However, it remains unclear to what extent these features jointly characterize academic writing quality and how their contribution may vary across disciplines. This study analyzes 167 introduction chapters of bachelor's theses written in Dutch (2024 - 2025) in pedagogical sciences, communication sciences, and law. Introductions were selected as prototypical academic synthesis texts that allow for meaningful cross-disciplinary comparison. Text quality is assessed using comparative judgement (Bouwer et al., 2023), while lexical sophistication, syntactic complexity, and cohesion are automatically analyzed using T-Scan (Pander Maat et al., 2014). Stance features are manually coded. Multilevel structural equation modeling will be used to predict the joint contribution of those linguistic features for text quality while accounting for disciplinary variation. The study is currently in the analysis phase. The goal of the presentation is to present preliminary insights and to discuss theoretical- and methodological considerations. *Keywords: academic writing, knowledge-crafting, structural equation modeling, t-scan, comparative judgement*

13:00 h	**3A-1 Poster Presentation, Ruppert 031**
Chair	*Alice Middelkoop*
	***Presenter*: Jacob Nouta** *Discussant:* Iris van der Tuin **Title: Epistemic Agency of Higher Professional Education Teachers: An Ecological and Design-Oriented Research Approach** *Authors: Jacob Nouta, Belinda Ommering, Lisette Munneke en Roeland van der Rijst*
	HPE teachers work in contexts shaped by shifting societal demands, diverse student groups, and evolving pedagogies. Consequently, they regularly encounter uncertainty—situations in which existing knowledge is insufficient and new actionable knowledge must be created. Epistemic agency (EA) is defined as the ability to identify gaps in actionable knowledge and to develop new, usable knowledge with appropriate thoroughness, individually or collectively (Munneke, 2024). This research investigates how EA manifests in teachers' work and learning practices and how it can be intentionally fostered. Rather than treating EA as a fixed individual competence, this research adopts an ecological perspective: EA emerges from dynamic interactions between teachers and their socio-material environment (Priestley et al., 2015). This approach highlights how opportunities for EA depend on contextual affordances and constraints. Such perspectives are underrepresented in HPE research but offer insight into how teachers learn and act in complex educational settings. This contribution presents my PhD research, started in September 2025, on epistemic agency (EA) of higher professional education (HPE) teachers, conducted within the research group Epistemic Agency at Utrecht University of Applied Sciences. Data collection for Studies 1 and 2 will begin in March 2026. In the discussion that follows the poster pitch, we will elaborate on the research design and methodology of the first and second PhD-studies. *Keywords: Epistemic agency, collective epistemic agency, HPE teachers*
13:00 h	**3A-1 Poster Presentation, Ruppert 031**
Chair	*Alice Middelkoop*
	***Presenter*: Stephany Angulo** *Discussant:* Iris van der Tuin **Title: Towards an Integrated Framework of First-Year Engineering Student Success** *Authors: Stephany Angulo Blanco*
	The transition to higher engineering education is a critical period, yet student success is often conceptualized in fragmented ways, focusing separately on study progress, well-being, or competence development. This study develops an integrated framework of first-year engineering student success. An integrative literature review following Whittemore and Knafl's methodology and PRISMA guidelines resulted in 45 peer-reviewed studies. Using an iterative, abductive approach, factors were identified inductively and subsequently organized through the lens of Self-Determination Theory. The findings show that individual, social, and instructional factors are mutually reinforcing, shaping study progress, well-being, and competence development as dynamically interconnected dimensions of the transition experience.

	Keywords: Student success, framework, integrative literature review, Self-Determination Theory, engineering education
13:00 h	**3A-1 Poster Presentation, Ruppert 031**
Chair	*Alice Middelkoop*
	***Presenter*: Amer Jaganjac** *Discussant:* Lauren Beehler **Title: Developing Inclusive Design competence through Practice Researchin Undergraduate ICT Education** *Authors: Amer Jaganjac, Roeland van der Rijst, Dineke Tigelaar, Kadian Davis-Owusu, Tom Langhorst*
	As digital technologies increasingly shape societal participation, undergraduate ICT education faces the challenge not of whether to teach Inclusive Design, but how to cultivate it as a meaningful professional competence. At the same time, professional-oriented universities have embraced Practice Research (PR) as a way to connect inquiry to real-world professional contexts. This poster presents synthesis of two article research that argues that Inclusive Design and Practice Research share a common epistemological foundation. When design is understood as a "designerly way of knowing, " and practice research as knowledge generated through action and reflection, Inclusive Design competence can be reframed as an outcome of a practice research culture. *Keywords: inclusive design, teaching practice research, ICT education*
13:00 h	**3A-1 Poster Presentation, Ruppert 031**
Chair	*Alice Middelkoop*
	Presenter: Benji van Beurden *Discussant: Geerte Savenije* **Title: How Statistics Teachers Frame and Notice Student Learning: Exploring Professional Vision in Higher Education** *Authors: Van Beurden*
	Many students in the social sciences find statistics difficult and uninteresting, and struggle to see how it contributes to their future. Even though this is a challenge when teaching statistics, higher educational research did not yet examine how statistics teachers frame and notice student learning as their lessons unfold. To close this gap, we observed (non-participatory) and interviewed (semi-structured, with stimulated recall elements) twelve statistics teachers about how they frame and notice student learning. Although data is still under analysis, they suggest that in the richest frame, student learning is viewed in terms of engagement and understanding as a consequence of teacher moves. These aspects are attended to through nuanced perceptions of student behaviours, questions, and responses, and interpreted by considering difficulty and familiarity of study topics. Follow-up studies should confirm whether the findings are representative, so they can guide professional development and teaching analytics.

14:00 h	**3A-2 Poster Presentation, Ruppert 031**
Chair	*Christos Palidis*
	***Presenter*: Kelly Gort** *Discussant:* Geerte Savenije **Title: Sneak into Reading - the effect of an online reading challenge on the reading engagement and reading comprehension of adolescent readers** *Authors: Kelly Gort, Roel van Steensel, Hans Hummel, and Jeroen Storm*
	Many students in prevocational education have difficulties with comprehending texts (Inspectie van het Onderwijs, 2024; Meelissen et al., 2023). Lower reading comprehension seems partly due to their disengagement while reading (Guthrie et al., 2012). The aim of this study was to examine whether promoting students' reading engagement through an online reading challenge contributes to their reading comprehension, more particularly, to their ability to navigate, integrate, and evaluate multiple expository texts. Online reading challenges are online tasks in which students engage with authentic simulated texts and tasks presented in a meaningful context connected to their graduation profile. We conducted an experimental study in which we compared the online reading challenge with a comparable paper-based reading challenge and a business-as-usual control condition. During the presentation, we aim to take the audience through the development of the challenge (design phase) and share the results of the first phase of the experimental study. *Keywords: online reading challenge, reading engagement, reading comprehension, adolescents, prevocational education*
14:00 h	**3A-2 Poster Presentation, Ruppert 031**
Chair	*Christos Palidis*
	***Presenter:* Dagmar Platte** *Discussant:* Geerte Savenije **Title: From Belief to Action: Examining the Domain Specific Mediating Role of Growth Mindset Behaviours on Achievements in Mathematics and Language in Primary School Students** *Authors: Dagmar Platte, Kate M. Xu, and Renate H.M. de Groot*
	Growth mindset theory suggests that students' beliefs about intelligence influence their motivation, learning behaviours, and academic performance. While interventions promoting a growth mindset have demonstrated promising outcomes, their effectiveness remains inconsistent, potentially due to a lack of emphasis on translating beliefs into concrete behaviours. In this study we investigate the mediating roles of five mindset-related behaviours and intrinsic motivation in the relationship between growth mindset beliefs and academic achievement in mathematics and language among primary school students in the Netherlands. A sample of 421 students (aged 9–13) completed questionnaires assessing growth mindset beliefs, motivation, and five aligned behaviours: embracing challenges, learning from mistakes, putting in effort, help-seeking, and self-monitoring. Results showed that mindset beliefs were significantly positively associated with all six proposed mediators in both mathematics and language domains. No significant differences in mindset beliefs and mindset-related behaviours were found between the two domains, whereas intrinsic motivation was

	significant higher for mathematics than for language. In mathematics, significant positive indirect effects of mindset beliefs on academic achievement were found through embracing challenges, learning from mistakes, and intrinsic motivation. In contrast, in the language domain, only embracing challenges showed a significant positive indirect association with academic achievement. These findings provide insights for designing more effective mindset interventions. By bridging the gap between mindset belief and mindset-related behaviour, this research contributes to enhancing educational practices that foster both motivation and academic achievement. *Keywords: Growth-Mindset, Motivation, Achievement, Mediation, Primary Education*
14:00 h	**3A-2 Poster Presentation, Ruppert 031**
Chair	*Christos Palidis*
	***Presenter*: Emma Oudheusden** *Discussant:* Gerhard Stoel **Title: Designing a lesson series for Dutch history education with genre pedagogy: feasibility, required teacher knowledge and use.** *Authors: Emma Oudheusden, Dr. Jannet van Drie, Prof. Dr. Carla van Boxtel*
	This PhD project aims to find a way to incorporate reading and writing education within the existing history curriculum in the Netherlands by means of using genre pedagogy. The group I focus on is the lower years of vmbo-t/havo at secondary school level. Genre-based teaching promotes an all-round deliberate genre literacy, which in turn helps with the reading and writing of texts (Stukker et al., 2024; Zwaan & Rapp, 2007). During a first explorative pre-pilot phase, I looked at the use of genre pedagogy in history education with three history teachers in a teacher-design-team (TDT). During a five month period, the TDT has created and tried out their own 'genres-in-history' lessons using design principles which were previously drawn up. Their findings were reported back to me, the researcher during the course of these five months. The design principles were adjusted according to the TDT's findings as the pre-pilot phase moved along, and at the end of this period I have taken their additional findings and designed a lesson series for 2 vmbo-t target group. The lesson series is about the topic of the Industrial Revolution. For my pilot study, a partly new group of teachers has been teaching these lessons. The data I am collecting from this pilot are a mix of qualitative and quantitative data, and consist of: teacher logbooks, student learner reports, student work, teacher interviews, group interviews with students, lesson observations and finally a genre test. Data collection is due to end within the next few weeks, after which the process of coding and analysis will start. *Keywords: History education* *Genre pedagogy* *Educational Design Research* *Feasibility*
14:00 h	**3A-2 Poster Presentation, Ruppert 031**
Chair	*Christos Palidis*

	***Presenter*: Hedwig van der Werff** *Discussant:* Iris van der Tuin **Title: Factors Influencing the Transition of Students with Special Educational Needs to Mainstream Secondary Education: A Qualitative Study of Educational Professionals' Perspectives** *Authors: H. S. van der Werff, N. Frans, D. H. H. Wildeman, A. A. de Boer, M. R. Luinge, M. J. Warrens*
	Several studies indicate the transition to secondary education as a critical opportunity for SEN students to enter in, or return to, mainstream education. Yet in the Netherlands, only 22% of SEN students with behavioral and psychological needs make this transition. In addition, the number of students switching to mainstream education varies a lot between schools. So far, research on the experiences of educational professionals in this decision-making process is slim. Therefore, this study explores the educational professionals' experiences of this process as a whole. This study explores the factors influencing the SEN or mainstream secondary school advice of SEN primary school students via semi structured interviews with educational professionals (N=69). Teachers, SEN coordinators, pedagogues and school leaders from several SEN primary or secondary schools as well as mainstream secondary schools were interviewed on their experiences with the advice and placement of SEN students in mainstream or SEN secondary education. All interviews were transcribed and openly coded with thematic analysis. The emerged themes are: student factors, process of formulating the secondary school advice and registering, collaborations between schools and the attitude of schools and society towards inclusive education. In conclusion, professionals mostly focus on student factors while forming the SEN or mainstream secondary school advice. Therefore, the SEN primary schools and mainstream secondary schools should support the students' needs by facilitating for example a few smaller classes in mainstream education for students who require support in task-oriented behavior. The recommendations will help schools to adapt to the students' needs, which will make them more likely to switch to mainstream education. *Keywords: Inclusive education, student factors, primary to secondary transition*
14:00 h	**3A-2 Poster Presentation, Ruppert 031**
Chair	*Christos Palidis*
	***Presenter*: Marit Boekema** *Discussant:* Jimte Ferweda **Title: Secondary school students' perspective-taking abilities in the context of Environmental Citizenship** *Authors: Marit Boekema, prof. dr. Joana Duarte, dr. Tim Huijgen, dr. Mohammad Gharesifard and prof. dr. Lucy Avraamidou*
	Environmental Citizenship (EC) has gained increasing attention within European educational policy. EC education plays an essential role to foster responsible environmental behavior and civic engagement by promoting knowledge, attitudes and abilities that support active participation in sustainability transitions (Hadjichambis et al., 2020). A critical but understudied ability within EC is perspective-taking. In this study, EC perspective-taking is conceptualized as students' ability to examine and explain the viewpoints of individuals and communities affected by climate change. Research indicates that perspective-taking promotes pro-social behavior and consideration of others' needs (Koessler et al.,

	2023), suggesting its relevance for EC competence development. Despite existing instruments measuring aspects of EC, limited empirical insight exists in the Dutch context regarding (1) perspective-taking within EC and (2) how EC knowledge, attitudes, and perspective-taking abilities vary across student background characteristics. Because no suitable instrument was available to measure perspective-taking within an environmental context, we developed a new questionnaire: The ECPT-S. This instrument was based on Davis's (1983) perspective-taking scale. The questionnaire was first pilot-tested. Subsequently, a large-scale quantitative study was conducted among approximately 700 secondary school students in 19 schools across the Netherlands. To assess students' EC knowledge and attitudes, we additionally employed two established instruments: the Climate Change Attitude Survey (Christensen & Knezek, 2015) and the Environmental Citizenship Opinions (Harskamp et al., 2023) survey. Together, these instruments enabled a comprehensive assessment of students' EC-related knowledge and attitudes to explore students EC levels across diverse student populations. Data analysis is still in progress. However, preliminary analyses indicate good internal consistency of the ECPT-S (α = .85). This study contributes to the conceptual and methodological development of EC education by offering a validated tool to assess perspective-taking and its relation to EC knowledge and attitudes. *Keywords: Environmental citizenship, perspective-taking, questionnaire, secondary education, sustainability education*

Abstracts 17 April, 3B Paper presentations

14:00 h	**3B Paper presentation, Ruppert 111**
Chair	*Marjon Fokkens Bruinsma*
	***Presenter*: Myrthe Lubbers** *Discussant:* Cassandra Tho; Sophie Oudman **Title: Student ownership and student participation: Practices and opportunities in secondary education** *Authors: Lubbers, M. E. C., Poortman, C. L., & Schildkamp, K.*
	This qualitative study describes how student agency practices and desired improvements were present in 13 secondary schools in The Netherlands. We distinguished between direct personal agency opportunities for students to shape their own learning in an autonomous way and to develop abilities accordingly (i.e., student ownership), and collective or proxy agency opportunities to participate in collective decision-making processes (i.e., student participation). We analyzed existing data from focus groups consisting of students, teachers, and team/school leaders (N = 73). Three key findings emerged. First, although previous research in this area have focused on greater inclusion of minority students, we found that unequal opportunities were present in various other forms. Second, we observed a shift from "being heard" to co-creation. Finally, student agency practices were frequently positioned as supplementary rather than integral to core subject content, highlighting a disconnect that limits the potential impact of student agency practices within the curriculum.

	Keywords: School improvement · Secondary education · Student agency · Student ownership · Student participation · Student voice
14:30 h	**3B Paper presentation, Ruppert 111**
Chair	*Marjon Fokkens Bruinsma*
	***Presenter*: Rinotha Senathirajah** *Discussant:* Janne Bosma; Sophie Oudman **Title: Fostering Inclusion for Students with Special Needs: A Systematic Literature Review on Blended Learning in Higher Education** *Authors: Rinotha Senathirajah, Suzan van Brussel, Esther van der Stappen, Marieke Meeuwisse*
	Despite diversity and inclusion being more in the limelight in recent years, inclusion of students with special needs in higher education (HE) is not evident. Learning environments in HE are not inclusive by design. To create inclusive learning environments, the implementation of blended learning (BL) models in HE is promising. However, research on how BL can foster inclusion in HE is still scarce. By integrating both inclusive and BL principles, instead of implementing and fostering these principles separately, we believe institutions can be more successful in achieving inclusive learning environments in HE. We systematically reviewed empirical and conceptual studies on how blended learning models and principles can be leveraged to create more inclusive environments. Through reflexive thematic analysis, three themes emerged. The first theme "Special needs of students" describes the needs of students possibly caused by neurodiversity (such as dyslexia, ADHD and ASS), visual or auditive impairments or physical disabilities. The second theme "Means of support" focuses on forms of support, varying from assistive technologies to weekly check-ins by a teacher. The third and final theme "Designing inclusive blended learning environments" explores the potential of BL models and principles to enhance inclusive learning environments by linking means of support to student needs. In conclusion, BL models and principles have the potential to foster inclusion in the learning environments for students with special needs. Further research is needed to understand the perspectives of teachers and students with special needs regarding good practices of integrating inclusive elements in blended education. *Keywords: Inclusive Education, Higher Education, Blended Learning, Systematic Literature Review, Reflexive Thematic Analysis*
13:30 h	**3B Paper presentation, Ruppert 111**
Chair	*Sophie Oudman*
	***Presenter:* Cassandra Tho** *Discussant:* Rinotha Senathirajah; Marjon Fokkens-Bruinsma **Title: Cultural Diversity in Challenge-Based Learning Settings** *Authors: Cassandra Tho, Yvette Baggen, Judith Gulikers, Perry den Brok*
	The contemporary world grapples with a myriad of multifaceted challenges encompassing climate change, public health crises, alongside rising populism, and societal polarization. Termed as 'Grand Societal Challenges' (GSCs), these issues are complex, transcends borders and affects diverse populations. Addressing GSCs necessitates collaborative efforts across disciplines, organizations, and cultures,

	demanding intercultural sensitivity. To prepare future graduates for tackling GSCs, higher education institutions are implementing challenge-based learning (CBL) approaches. CBL emphasises interdisciplinary collaboration and engagement with societal stakeholders. However, the cultural diversity aspect in CBL is often neglected. To leverage on the learning potential that culture diversity brings, an explicit recognition of the cultural boundaries is needed to foster dialogue and learning opportunities. This paper explores students' and teachers' perspectives on cultural diversity in CBL contexts. 24 students and 18 teachers across three different CBL courses (2014-2015) shared their perspectives through semi-structured interviews. Findings highlight that students report a variety of learnings from cultural diversity within CBL; that current efforts to stimulate learning with and from cultural diversity are often implicit and not directly connected to the topics; and there are many opportunities that can be leveraged upon, such as having a more inclusive assessment criteria and ensuring a balanced ratio of local and international students in groups. In terms of support needed to learn with and from cultural diversity, students suggested a 'middle person' to bridge students and teachers and allocating time for team-building and social activities. Teachers requested support in terms of resources such as information, learning materials and learning activities that they can use in their courses, and also for sharing sessions with other teachers (intervision). This research is one of the first to look into students' and teachers' perspectives of cultural diversity in CBL contexts and aims to offer useful insights to support CBL practitioners to leverage upon the learning potential of cultural diversity in CBL contexts. *Keywords: Cultural diversity, challenge-based learning*
13:00 h	**3B Paper presentation, Ruppert 111**
Chair	*Sophie Oudman*
	***Presenter*: Janne Bosma** *Discussant:* Myrthe Lubbers; Marjon Fokkens-Bruinsma **Title: Student mental well-being in daily life: A dynamic network analysis** *Authors: Janne Bosma, Mihai Constantin, Nele Jacobs, Johan Lataster, Renate de Groot*
	The mental well-being of students (hereafter: StMWB) in higher education is high on the research agenda. While there is a clear focus on improving StMWB, its definition remains ambiguous, and interventions to support students often overlook the complex interactions of StMWB aspects. A dynamic network approach may contribute to our understanding of StMWB by exploring the interactions between different aspects that theoretically constitute the construct, rather than viewing mental well-being as stable and passive. Despite the potential of this approach, (dynamic) network analyses of mental well-being have yielded inconsistent findings. In this study, we therefore aim to apply a dynamic network approach to investigate the daily interactions of StMWB aspects in higher education students, with the objective of identifying key components and potential intervention targets. We collected ecological momentary assessment data from first- and second-year students at Dutch universities (and universities of applied sciences). Participants received 10 notifications daily for a week, prompting them to complete a 2-minute self-report on their state mental well-being (e.g., affect, self-esteem). Our analysis included 351 students, resulting in 18,889 complete observations with a response rate of 76.9%. To construct a dynamic network, we employed multilevel Vector Autoregression in R. During this presentation, we discuss the network and temporal

	associations between mental well-being items (e.g., the association between cheerful at time t-1 and energetic at time t). Within the network, some aspects of well-being seem more central than others, suggesting they could be crucial intervention targets. These findings and the future of network analysis will be discussed further during the paper presentation. *Keywords: Well-being; Higher education; Network approach; Ecological momentary assessment*

Abstracts 17 April, 3C Paper presentations

14:00 h	**3C Paper presentation, Ruppert 114**
Chair	*Laurie Delnoij*
	***Presenter*: Annemarie Sänger** *Discussant:* Boukje Lindijer; Xiaoqi Feng **Title: Fostering interprofessional identity formation to support interprofessional collaboration – Identifying guidelines for educational design** *Authors: Annemarie B. Sänger, Renée E. Stalmeijer, Simon Beausaert, Jascha de Nooijer*
	Background Health professions education (HPE) aims to prepare students for a work field increasingly demanding interdisciplinary/interprofessional collaboration (IPC) across and beyond health professions. Fostering interprofessional identity (IPI) has been suggested to be key to developing IPC competencies. However, enabling IPI formation during HPE is hampered by varying definitions and conceptualisations of IPI and the absence of an educational design framework. Therefore, this study aimed to identify (1) the main characteristics of an IPI and (2) theoretically grounded design principles for education fostering IPI formation. Methodology We conducted a critical narrative review of educational sciences, HPE and management sciences literature. We performed two iterative, non-exhaustive literature searches on 1) how IPI has been conceptualised and explained, and 2) learning mechanisms and pedagogical practices fostering IPI formation. Reflexive thematic analysis was used on both searches separately. Results Five theories were identified as being commonly used to explain IPI formation. Reflexive thematic analysis of these theories resulted in five themes capturing the main characteristics of an IPI: (1) sense of belonging to an interprofessional team; (2) commitment to working interprofessionally; (3) values, attitudes, beliefs and ethics related to IPC; (4) knowledge and understanding of roles, responsibilities and expertise; and (5) IPC skills. Next, reflexive thematic analysis led to identification of educational design principles fostering IPI formation, describing interventions at the student, team, faculty and curriculum levels. Interprofessional student teams should facilitate interaction, practice and feedback opportunities; faculty should provide guidance and act as role models; and the curriculum should ensure prolonged engagement in interprofessional projects. Together, the team, faculty and curriculum should create a psychologically safe learning environment essential for fostering IPI formation.

Discussion/conclusion
This critical narrative review identified key characteristics of an IPI and theoretically grounded design principles to inform the (re)design of interprofessional education. Future research should address the influence of power dynamics and the hidden curriculum on IPI formation, and examine how the identified design principles foster interprofessional identity formation in practice through design-based research and longitudinal studies.

Take-home message
Education that fosters students' IPI formation requires an integrated design involving interprofessional student teams, faculty and curriculum to cultivate a supportive and psychologically safe learning environment.

Keywords: Interprofessional identity; interprofessional/interdisciplinary collaboration; educational design; critical narrative review

14:30 h	**3C Paper presentation, Ruppert 114**
Chair	*Laurie Delnoij*
	***Presenter*: Niklas Wenzel** *Discussant:* Anke Swanenberg; Xiaoqi Feng **Title: Studying in the Wild: An ESM Study on Study Behaviour, Break-Taking, and Subjective Experience in Authentic Self-Regulated Learning Settings** *Authors: Niklas Wenzel, Felicitas Biwer, Wisnu Wiradhany, Anique de Bruin*
	Students in self-regulated learning (SRL) settings must manage not only what they study, but also how they regulate their effort investment across time. Although study breaks may support recovery and sustained engagement, little is known about how students combine studying, break taking, and non-study activities in everyday learning contexts. This exploratory study examines within-day study behaviour, break choices, and subjective experience in authentic university study settings using experience sampling methods (ESM). University students (N = 120) completed up to six smartphone-based ESM prompts per day across up to 14 days in December 2024. Prompts assessed study behaviour, non-study activity, break taking, and subjective experience. Analyses combined descriptive summaries with Bayesian multilevel models to examine (1) how students distributed studying and breaks across the day and (2) how behavioural states and affect related across time. Descriptive findings showed that study and break behaviour followed systematic within-day patterns. Students tended to study in the middle of the day, while deliberate breaks were most likely from mid-afternoon into early evening. Deliberate breaks also differed from other non-study episodes in duration and activity profile. Inferential analyses further showed strong behavioural inertia across study states. Higher lagged Positive Affect predicted a greater likelihood of subsequent study-related states, and current study-related states were associated with higher Positive Affect. In contrast, Negative Affect showed weaker and less consistent within-person relations. Together, these findings suggest that students' everyday study behaviour is structured, that deliberate breaks may represent a distinct regulatory activity, and that Positive Affect and studying may form self-reinforcing dynamics in authentic SRL contexts. The study offers an initial empirical window into break regulation in authentic SRL settings and highlights promising directions for future research and intervention. *Keywords: Self-Regulated Learning, Effort Regulation, Break-Taking, Higher Education, Experience Sampling Method*
13:00 h	**3C Paper presentation, Ruppert 114**
Chair	*Xiaoqi Feng*
	***Presenter*: Boukje Lindijer** *Discussant:* Niklas Wenzel; Laurie Delnoij **Title: Studying The Relation between Online Engagement and Performance: A Multiverse Analysis**

	Authors: Boukje Lindijer, Sanne Goedhart, Suzanne Hoogeveen, Charlotte Rietbergen, Renske de Kleijn, Irene Klugkist
	Background While there is meta-analytic evidence that online engagement is positively related to performance, findings are heterogeneous. Particularly for log data indicators of engagement, which have been considered to often lack theoretical grounding and standardisation, it is important to evaluate whether variations in indicator operationalisations and analytical decisions contribute to the heterogeneous relationship with performance. **Objectives** This study aims to evaluate the robustness of the predictive value of theory-based online engagement indicators on exam performance, specifically concerning sensitivity to variations in indicator operationalisations, analytical decisions, and non-engagement handling. **Methods** Five online engagement indicators were created from log data of 1036 undergraduate students working in a statistics online learning environment: time on task, effort, persistence, pace, and anti-cramming. A multiverse analysis evaluated the robustness of predictive relations between online engagement and exam performance for different indicator operationalisations and analytical decisions. This led to a proposed model, for which further robustness checks evaluated the effect of non-engagement handling. **Results and Conclusion** Engagement indicators collectively predicted exam performance, but analytical decisions, non-engagement handling, and, to a lesser extent, indicator operationalisations, did impact the findings. In terms of analytical decisions, active consideration of whether or not to include online performance as a control is recommended. For non-engagement handling, two-part modelling is suggested to prevent distorted findings due to zero-inflated distributions when records of non-engaged students are converted to zero, as well as a loss of power and information when non-engaged students are excluded. *Keywords*: *learning analytics; multiverse analysis; student engagement; formative assessment; statistics education*
13:30 h	**3C Paper presentation, Ruppert 114**
Chair	*Xiaoqi Feng*
	***Presenter*: Anke Swanenberg** *Discussant:* Annemarie Sänger; Laurie Delnoij **Title: Rethinking Assessment for Transdisciplinary Learning: Insights from a Literature Review** *Authors: Anke Swanenberg, Judith Gulikers, Yvette Baggen, Perry den Brok*
	To prepare students for complex societal challenges, higher education institutions increasingly adopt transdisciplinary learning. This form of education engages students in open-ended, complex problems that require knowledge integration across disciplinary and non-academic boundaries, in collaboration with societal partners. Learning is conceived as both an individual and collective process, encompassing uncertainty, boundary crossing, collaboration, and attention to both process and product.

	Such characteristics challenge traditional outcome-oriented and individually focused assessment practices. Learning trajectories and outcomes in transdisciplinary contexts are often unpredictable, extend beyond disciplinary expertise, and involve collective knowledge construction. As a result, existing assessment frameworks, typically grounded in predefined and discipline-specific learning outcomes, prove insufficient. At the same time, educators and educational developers express a growing need for guidance in designing assessment approaches that better align with transdisciplinary education. This study presents a structured literature review addressing the following research question: Which challenges, barriers, opportunities, and needs are identified in the scientific literature regarding the development and implementation of assessment for transdisciplinary learning? The review synthesizes conceptual papers, empirical studies, and case descriptions on transdisciplinary learning and assessment. Given the limited literature explicitly focusing on assessment in transdisciplinary student learning, related educational domains (such as interdisciplinary, challenge-based, and entrepreneurial education) were included, as they share core characteristics with transdisciplinary learning. The analysis was conducted using a challenges–barriers–opportunities–wishes framework and further coded for recurring themes, including feedback, formative assessment, reflection, and innovative assessment forms. The literature consistently indicates that traditional assessment methods insufficiently address the open and uncertain nature of transdisciplinary learning. Reported challenges include difficulties in assessing knowledge integration beyond one's disciplinary expertise, making individual learning visible within collaborative processes, and balancing process- and product-oriented assessment. At the same time, the literature highlights opportunities to reconceptualize assessment. Authors stress the importance of clarifying the purpose of assessment (e.g., formative or combined formative–summative), supporting inclusion and diversity, incorporating personal learning goals and learning surprises as assessment foci, and employing dialogic feedback, structured reflection, and programmatic assessment strategies. Together, these synthesized insights provide a consolidated knowledge base and serve as literature-informed design considerations for the next phase of the research. The contribution is particularly relevant for educators and educational designers seeking theoretically grounded guidance for assessment design in transdisciplinary education. *Keywords: Assessment, transdisciplinary learning, higher education, wicked problems, interdisciplinary learning*

Abstracts 17 April, 3D Round Table discussions

13:00 h	**3D Round Table, Ruppert 032**
Chair	*Yol Nakanishi*
	Presenter: **Sara De Bruin** *Discussant:* Marieke Thurlings **Title: Adaptive Induction: an Integrative Literature Review into Adaptive Support for Beginning Teachers.** *Authors: Sara de Bruin, Marieke van Geel, Jitske de Vries, Kim Schildkamp*
	Many beginning teachers leave the profession during their first years of teaching. To increase the retention as well as the well-being and teaching qualities of the beginning teachers, various measures and activities can be implemented, also known as 'induction'. It is increasingly stressed that it may be important to match induction measures and activities with the professional development needs of beginning teachers. Recent research showed that the provision of induction activities that match the need of beginning teachers is related to a lower intention to turnover or leaving the profession. The current study is aimed at identifying ways to adapt induction to beginning teachers' needs. Based on existing adaptivity frameworks, about adapting teaching to learners' needs, and taking an integrative literature review approach, a framework will be developed which indicates in what ways adaptive induction for beginning teachers can be conceptualized. The major adaptivity components are control (who oversees the adaptivity), source (based on what will induction measures or activities be adapted), and target (which elements of induction measures or activities will be adapted). Following the PRISMA guidelines, over 2500 abstracts have been screened. Currently, full-text screening and coding takes place. In the full-text coding, fragments in included papers related to adaptive induction are labeled. In the results section, these labeled fragments are used to adjust the initial framework and to provide examples of adaptivity. The aim is to create a final framework which can be used to conceptualize and design adaptive induction, to guide research and practice in adaptively supporting beginning teachers. *Keywords: Beginning Teachers, Adaptive Induction, Teacher Retention*
13:30 h	**3D Round Table, Ruppert 032**
Chair	*Yol Nakanishi*
	Presenter**: Dorieke Swinkels-Veldt** *Discussant:* Marieke Thurlings **Title: The Didactic Contract: from implicit to explicit** *Authors: Swinkels-Veldt, D., Van de Sande, R., Vermeulen, M., & Nijland, F.*
	Initially, the didactic contract (DC) referred to the implicit, mutual expectations between teacher and student within French mathematics education. The challenge for teachers nowadays is how to design effective learning environments that provide space for dialogue, inclusion, and innovation. Mutual expectations and responsibilities in the learning environment and interaction that remain unspoken nevertheless influence any new way of working. When the DC becomes visible and open to discussion, the implementation of innovations can proceed more smoothly. In addition, students who have difficulty interpreting expectations for various

	reasons, will then have a better chance of participating. The theory development surrounding the concept of DC from this literature review can make a positive contribution to inclusion. *Keywords: didactic contract, educational innovations, literature review*
14:00 h ***Chair***	**3D Round Table, Ruppert 032** *Yol Nakanishi*
	***Presenter*: Jorn ten Brink** *Discussant:* Tim Mainhard **Title: Designing a validated instrument to measure teachers' Professional Identity tensions** *Authors: Jorn ten Brink, dr. Harmen Schaap, dr. Jeroen de Jong, prof. dr. Paulien Meijer*
	Professional identity tensions refer to the internal struggle teachers experience between the situation-as-is and the situation-as-preferred emerging in a specific context (Pillen, Beijaard & Den Brok, 2013), often resulting in feelings of discomfort, frustration, or other emotional responses (van der Wal et al., 2019). Such tensions may lead teachers to leave the profession or remain reluctantly—so-called "reluctant stayers" (Bartlett et al., 2024; Santoro, 2018). By conducting longitudinal research on professional identity tensions, this study aims to contribute to strengthening teacher wellbeing and preventing unwanted attrition. To examine identity tensions among both novice and experienced teachers in primary, secondary, and vocational education, we are developing a new measurement instrument. The process of instrument development is central to this paper presentation and builds on existing tools (Pillen et al., 2013), scientific literature, and a participatory design process with teachers, school leaders, and HR experts from various educational sectors. The instrument is theoretically grounded in Self-Discrepancy Theory (Higgins, 1987), which has previously been applied to teachers' professional identity (Lauriala & Kukkonen, 2005). Within this framework, discrepancies are distinguished between the actual self, the ideal self (personal aspirations), and the ought self (external expectations). The participatory design process consists of mutiple iterative sessions in which ideal-self and ought-self statements were generated, verified, selected, and refined. This resulted in a set of 15 ideal-self and 15 ought-self statements. For each statement, respondents answer two questions: (1) the extent to which they can meet this expectation in practice, and (2) how much tension this causes. The co-designed instrument will be implemented from late 2026 in a longitudinal study involving approximately 600 teachers. This study aims to examine the development of identity tensions over time and their relationship with wellbeing, burnout, and attrition. The round table discussion will focus both on construct-validity and underlying methodological considerations. *Keywords: Professional Identity tensions, Wellbeing, Burn-out, Instrument development*

14:30 h	**3D Round Table, Ruppert 032**
Chair	*Yol Nakanishi*
	***Presenter*: Karina de Waal** *Discussant:* Tim Mainhard **Title: From Technasium to Bilingual Education: A Study on Meso-level Differentiation in Relation to Equity in Secondary Education.** *Authors: K. de Waal*
	Differentiation is often presented as a route to inclusion and equity by aligning teaching with diverse pupil needs. At the same time, many authors warn that, in practice, differentiation can result in segregation, through practices such as tracking and streaming, and unequal opportunities to learn. Conceptual ambiguity contributes to this tension, since 'differentiation' is used both for flexible within-class practices in heterogeneous classrooms and for organisational arrangements that create more homogeneous groups. Focusing on Dutch secondary education, we employ the analytic lens of meso-level differentiation (MD): intentional, organised provision at the meso-level that produces differences between groups of students enrolled at the same educational level within the same school. Using schools' official communications for a stratified sample of 100 locations, we identified 1,234 programmes and coded features such as rationale, learning domain, accessibility, learning time, status enhancement and costs. MD appears near-universal (99 of 100 schools; mean 12.3 per location). Extended learning time for specific groups of students is common, while accessibility varies: equal access is frequent, but protective (mandatory) and promotive (selective) admission regularly occur. Status enhancement is sometimes emphasised by schools and a form of fee-based provision, although present in a minority of programmes, is offered by most schools. A HOMALS analysis supported a typology of four program types: distinctive, supportive, enriching and signature, capturing systematic combinations of rationales, learning domains and access rules, programme duration and status effects. Associations between MD and school attributes are generally weak but patterned: medium-sized municipalities tend to offer broader provision; higher tracks and high-SES schools provide more and other types of programmes than lower tracks and low-SES schools. These school level policy choices warrant careful assessment of intended and unintended equity implications. *Keywords: Differentiation, educational inequality, additional programmes*

Abstracts 17 April, 3E Round Table discussions

13:00 h	**3E Round Table, Ruppert 029**
Chair	*Hannah Odink*
	***Presenter*: Jet Bierman** *Discussant:* Jeroen Janssen **Title: Beyond the classroom: methodologies for studying informal active learning spaces** *Authors: Prof. Dr. M.L.L. (Monique) Volman, Prof. Dr. L.J.F. (Frank) Cornelissen, Dr. E. J. (Els) Kuiper*

	Universities increasingly invest in formal learning spaces that are explicitly designed to support active learning pedagogies. Therefore, many universities have developed active learning classrooms (ALCs), in which the spatial layout (and often technology) facilitates student participation and collaboration. In parallel, a wide range of informal learning spaces exists, such as open learning areas, library zones and project rooms, where students come together and study. Active learning may also occur in these learning spaces with or without technology. However, it is not yet clear how informal learning spaces are utilized by students to actually support active learning. Moreover, there is limited consensus on appropriate methods to study these spaces systematically. The proposed roundtable therefore adopts a primarily methodological focus: jointly exploring and refining research approaches to capture the use, experience and potential of informal learning spaces. *Keywords: informal learning spaces, methodological approaches, active learning*
13:30 h	**3E Round Table, Ruppert 029**
Chair	*Hannah Odink*
	***Presenter*: Sina Gottschlich** *Discussant:* Jeroen Janssen **Title: Creating and testing an intervention to improve students' study approach for dealing with uncertainty about knowledge levels** *Authors: Sina Gottschlich, Judith Sieben, Hillie Aaldering, Anique de Bruin*
	University students are often faced with a large amount of information that they need to learn. Especially in their first year of studying at university, students experience uncertainty about how deeply they should engage with the content and materials. This may be reflected in struggles related to identifying what students' current level of knowledge is, where that level needs to be, how to reach it, and whether they succeeded. In order to support students in dealing with this challenge, we are currently designing an intervention to provide students with ideas and strategies to deal with this uncertainty. This intervention will be implemented and tested in a research study combining Experience Sampling Method and focus group interviews. In the present roundtable discussion I would like to discuss our first ideas about the format and content of the intervention, as well as the design of the study that tests the impact of our intervention. *Keywords: uncertainty, self-regulated learning, intervention*
14:00 h	**3E Round Table, Ruppert 029**
Chair	*Hannah Odink*
	***Presenter:* Shika Pai** *Discussant:* Liesbeth Kester **Title: The Role of Educators in Fostering Identity Safety** *Authors: Shika Pai*
	Professional Identity Formation (PIF) is a central process in medical education, in which students internalize the values, norms, and practices of the medical profession and learn to "think, feel, and act like physicians" (Sternszus et al., 2024). This process occurs through both formal learning and informal experiences, such as observing role models and engaging with educators, and involves integrating pre-existing personal identities with emerging professional roles. However, PIF is often

	challenging: students may experience tension between their personal and professional identities, feel excluded or invisible, or sense pressure to suppress aspects of themselves (Santivasi et al., 2022; Sawatsky et al., 2023; Vaa Stelling et al., 2023). Identity safety, which refers to the degree to which learners can be themselves free of negative perceptions, offers a framework for understanding conditions that support authentic engagement in PIF (Bullock et al., 2024). Identity safety encompasses three interrelated dimensions: belonging in the medical community, being seen and valued as whole persons, and the agency to draw on one's identities in serving patients. Educators play a pivotal role in shaping the learning environment, modeling professional norms, and fostering inclusion. While prior research highlights their influence on belonging and supportive climates, limited evidence examines how educators explicitly contribute to identity safety across its interrelated dimensions. Understanding these processes is critical to enabling students to integrate their identities, engage fully in PIF, and bring meaningful aspects of themselves into their developing professional roles. The current study addresses this gap by asking: How do medical students experience identity safety during professional identity formation, and in what ways do educators facilitate this process? Adopting the method of symbolic interactionism, we aim to conduct semi-structured interviews with students from Master's of medicine programs across the Netherlands. Thematic analysis will be used to analyse the data. *Keywords: Identity safety, Belonging, Agency, Symbolic interactionism, Medical education, Professional Identity Formation*
14:30 h	**3E Round Table, Ruppert 029**
Chair	*Hannah Odink*
	***Presenter*: Sofia van Santen** *Discussant:* Liesbeth Kester **Title: Characteristics of Social-Justice-Oriented Learning Ecosystems: A Systematic Literature Review of Empirical Studies** *Authors: Sofia van Santen, Elise Peters, Tessa van Schijndel, Monique Volman, Dieuwke Hovinga*
	Background Learning ecosystems (LEs) are increasingly proposed as cross-contextual infrastructures that connect formal, non-formal, and informal learning environments. While often positioned as mechanisms for more just youth learning and development, little is known about how their design supports social justice in practice. In this review we ask: What are characteristics of LEs that promote social justice? Methods We developed an integrated analytical framework combining ecological perspectives on learning with a dual social justice perspective distinguishing equality (of access and opportunity) and equity. Using this framework, we conducted a systematic literature review of 20 empirical studies of youth-oriented LEs, examining the functions and characteristics of ecosystem elements. Findings We identified distinct equality- and equity-oriented LE characteristics. Equality-oriented approaches primarily expanded access to existing formal learning and

	career pathways. Equity-oriented approaches centered youths' lived experiences, informal contexts, community relevance, identity development, and empowerment. Findings underscore the need to remain critical about what counts as equity, and how a true ecological perspective (that recognizes and values diverse learning contexts and knowledge practices) can be fully embraced in practice. Contribution Integrating ecological and dual social justice perspectives advances understanding of how LEs can be designed to support social justice. *Keywords: Learning ecosystems, Ecological perspectives on learning, Equity in learning, Inclusion, Learning across contexts, Youth development*

Abstracts 17 April, 4A Poster presentations

15:30 h	**4A Poster Presentation, Ruppert 031**
Chair	*Stephany Angulo*
	***Presenter*: Jingyi Qiao** *Discussant:* Iris van der Tuin **Title: Learning Analytics Dashboards for Adaptive Teaching: How Design Choices Shape Adaptive Feedback in Inquiry-Based Learning** *Authors: Jingyi Qiao, Tessa Eysink, Mohammadreza Farrokhnia*
	Adaptive teaching is essential in inquiry-based learning (IBL) environments, where students follow diverse learning pathways and classroom situations often require flexible instructional responses. With the increasing use of simulation-based learning environments, teachers must rely more on indirect evidence, such as learning analytics data, to understand students' progress and needs. Teacher dashboards are designed to make such data visible, yet it remains unclear how different dashboard designs influence teachers' adaptive teaching processes. This study investigates how variations in dashboard design affect teachers' adaptive teaching in simulation-based IBL contexts. Thirty teachers participated in a study involving training in the Go-Lab environment, interaction with dashboard prototypes, and scenario-based instructional decision-making tasks. Data were collected through written feedback forms, usability questionnaires, and stimulated recall interviews. Teacher feedback quality was analyzed using an adapted coding scheme assessing affective, cognitive, and constructive dimensions, while teachers' metacognitive processes were examined through categories of metacognitive knowledge, experience, and skills. Descriptive analysis, non-parametric tests, and Qualitative Comparative Analysis (QCA) were employed to explore relationships between dashboard design, teacher metacognition, and feedback quality. The findings aim to inform the design of teacher dashboards that better support adaptive teaching in digital inquiry-based learning environments. *Keywords:*

15:30 h	**4A Poster Presentation, Ruppert 031**
Chair	*Stephany Angulo*
	***Presenter*: Erica Wijnands-Pot** *Discussant:* Iris van der Tuin **Title: Research and Inquiry Skills among Healthcare Practitioners with Level 3 and 4 Education.** *Authors: E.J.C.(Erica) Wijnands-Pot; A.(Annoesjka) Boersma; Prof. E.(Elly) de Bruijn*
	Developing research and inquiry skills (RIS) among healthcare students is essential, as they enable practitioners to address problems and drive innovation. Vocational education, however, struggles to understand RIS and its development in training programmes. Although RIS is often associated with higher professional and academic education (International Standard Classification of Education, ISCED-5-8), it is also relevant to ISCED 3&4 educated healthcare practitioners. However, little research has been done specifically on their RIS. The literature identifies three interpretations of RIS: 1) conducting sound research; 2) enhancing practice by using research findings and identifying knowledge gaps; 3) a situated view positioning RIS as an aspect of vocational competence, essential for action and problem-solving within specific contexts. It is assumed that ISCED 3&4 educated practitioners mainly enact this third, situated form of RIS, but little is known about RIS as an integral dimension of vocational competence, particularly regarding its enactment in practice. From a socio-cultural perspective, vocational competence involves acting adequately within a specific context and comprises multiple dimensions grounded in the vocation. When RIS is viewed as such a dimension, it represents an integrated, socially constructed combination of understanding and action. Earlier research identified characteristics of RIS-enactment and triggering factors among ISCED-6-educated nurses; this study examines how these manifests among ISCED-3&4-educated practitioners. Nineteen key informants (ISCED 3&4 educated nurses, school educators, and workplace educators) were interviewed and analysed using template analysis, with findings from the earlier study serving as 'a priori' themes. Preliminary findings show that characteristics related to client care and care situations are clearly recognised, especially those close to individual clients. Personal and vocational practice factors are acknowledged to trigger, yet sometimes also restrict RIS enactment. Fewer opportunities and lower expectations for RIS-enactment than for ISCED 6-educated colleagues are experienced. These insights deepen the understanding of RIS as a dimension of vocational competence and offer implications for educators. *Keywords: Vocational Education, Research and Inquiry Skills, Healthcare*

15:30 h	**4A Poster Presentation, Ruppert 031**
Chair	*Stephany Angulo*
	***Presenter*: Korteland Robert-Jan** *Discussant:* Hanno van Keulen **Title: Teaching What You See: Visual Search, Interpretation, and Visuomotor Actions in One-to-One Health Practice Education** *Authors: Korteland, R-J; Kok, E.; Altena, L.; van Ginkel, S., & van Gog, T.*
	With technological advances, health professionals increasingly interpret complex visualizations, such as diagnosing retinal diseases using digital imaging techniques in optometry. As a result, students in health practice education must learn to perform complex visual tasks that require the integration of cognitive schemas, visual perception, and motor skills. These tasks are taught through one-on-one interactions using the cognitive apprenticeship instructional framework, wherein experts guide novices in mastering complex visual tasks. However, near-peer tutors (i.e., advanced students who co-teach courses) also commonly teach novices. Previous research suggests that experts may struggle to verbalize their knowledge in an understandable way, which could hinder their ability to teach novices effectively. In contrast, near-peer tutors may have a better understanding of novices' learning needs, allowing them to explain complex concepts in ways that align with the novice's level of knowledge. Hence, it is questionable whether experts can effectively explicate their knowledge to novices or if near-peer tutors might be better at this due to their recent learning experiences within the same training program. The aim of this study was to investigate the differences between experts and near-peer tutors in their ability to explicate their knowledge about the use of task-specific tools (VM), performing search strategies (VS), and identification of objects' visual features, to successfully perform complex visual tasks in clinical practice, and how this relates to the extent to which they explicate this knowledge in teaching novices. Preliminary results showed significant differences between task elements (VM, VS, and VI), but no significant differences between experts and near-peer tutors. In both groups, VI was least explicated during clinical performance and modeling, whereas reflection elicited substantially more VS and VI knowledge, indicating that especially VI often remained implicit. *Keywords: complex visual tasks, health practice education, cognitive apprenticeship, near-peer teaching, knowledge encapsulation, intermediate effect*
15:30 h	**4A Poster Presentation, Ruppert 031**
Chair	*Stephany Angulo*
	***Presenter*: Janine Verkerk** *Discussant:* Hanno van Keulen **Title: Secondary Science Teachers' Embodied Approaches for Students' Conceptual Understanding: An Exploratory Study** *Authors: Janine C. Verkerk - Radboud Teacher Academy, Radboud University, Nijmegen, The Netherlands.*
	Research on embodied cognition shows considerable potential for science education, where students must make sense of abstract and dynamic processes (Hayes & Kraemer, 2017; Kersting et al., 2021). Despite growing interest in embodied learning interventions, relatively little is known about how embodiment

is enacted in classrooms and how teachers make practical decisions about their use (Macrine & Fugate, 2021; Skulmowski & Rey, 2018). This study addresses this gap by examining how secondary science teachers who already use embodied approaches design, implement, and evaluate these practices in their classrooms.

This poster presentation reports on ongoing PhD research into the practices and perspectives of approximately twelve Dutch secondary science teachers who intentionally incorporate embodied learning in physics, chemistry, and biology lessons. Data collection involves classroom observations, semi-structured interviews, and student exit tickets. The study investigates how teachers 1) design embodied lessons, 2) implement embodied activities, and 3) evaluate their use for students' conceptual understanding of scientific concepts and processes. In addition, we investigate the motivations, pedagogical considerations, and contextual constraints that shape teachers' decisions to implement these approaches.

Very preliminary findings suggest that teachers conceptualize embodied learning as a multifaceted instructional approach that integrates bodily engagement with cognitive processing, reflection, and conceptual understanding. Teachers describe using the body as a representational tool to enact particles, forces, or other scientific phenomena, thereby making abstract processes visible and manipulable. Early insights also highlight teachers' evaluative judgments regarding which concepts can be effectively embodied, as well as concerns about misconceptions and the importance of student guidance. The final results will likely highlight the diversity of instructional approaches to embodiment across subjects, differences or similarities in how teachers conceptualise and operationalise embodiment in practice, and the ways teachers interpret and evaluate students' learning during embodied activities.

References Abstract

Hayes, J. C., & Kraemer, D. J. (2017). Grounded understanding of abstract concepts: The case of STEM learning. Cognitive research: principles and implications, 2(1), 7.
Kersting, M., Haglund, J., & Steier, R. (2021). A growing body of knowledge: On four different senses of embodiment in science education. Science & Education, 30(5), 1183-1210.
Macrine, S. L., & Fugate, J. (2021). Translating embodied cognition for embodied learning in the classroom. In Frontiers in Education (Vol. 6, p. 712626). Frontiers.
Skulmowski, A., & Rey, G. D. (2018). Embodied learning: introducing a taxonomy based on bodily engagement and task integration. Cognitive Research, 3(1). https://doi.org/10.1186/s41235-018-0092-9

Keywords: Interviews, Observations, Embodied Learning, Science Education, Teaching

Abstracts 17 April, 4B Paper presentations

15:30 h	**4B Paper presentation, Ruppert 111**
Chair	*Mary Jo Diepeveen*
	Presenter: **Bo Sichterman** *Discussant:* Yanchen Zhu; Jeroen Janssen **Title: Supporting peer learning with artificial intelligence: A systematic literature review** *Authors: Bo Sichterman, Omid Noroozi, Josien Boetje, Stan van Ginkel, Hassan Khosravi, Johan Versendaal*
	The integration of Artificial Intelligence (AI) into peer learning has gained significant attention with demonstrated benefits in offering personalised support and enhancing learning outcomes. However, an overview of student characteristics, learning environment conditions, learning processes, learning outcomes, and their interplay constituting AI-supported peer learning remains lacking. This systematic review synthesises findings from 26 empirical studies published between 2010 and 2024, identified through rigorous searches in PsychInfo, ERIC, Education Research Complete, Web of Science, and Scopus databases, following a PRISMA-guided methodology. Building on Biggs's 3P model, the review examines student characteristics, learning environment conditions, peer learning processes, and learning outcomes in the AI-driven peer learning context. The findings underscore AI's potential to transform peer learning through responsive and adaptive interventions while addressing challenges like over-reliance and didactical design. This review offers actionable insights for scholars and educators to guide effective AI integration in peer learning settings. *Keywords: Peer learning; artificial intelligence; higher education; systematic review*
16:00 h	**4B Paper presentation, Ruppert 111**
Chair	*Mary Jo Diepeveen*
	Presenter**: Yanchen Zhu** *Discussant:* Bo Sichterman; Jeroen Janssen **Title: A Systematic Literature Review of GenAI Feedback for Writing Tasks in Higher Education** *Authors: Yanchen Zhu, Mohammadreza Farrokhnia, Bo Sichterman, Omid Noroozi, Harm Biemans, Kazem Banihashem (the order TBD!)*
	Generative Artificial Intelligence (GenAI) tools have been widely used in higher education. Their use for feedback in writing tasks represents a nascent research area; however, the literature is expanding rapidly, making it difficult to discern an overview of current research practice. The literature lacks an overview of GenAI feedback message features, types of implementation, contextual elements, students characteristics, and the relationships between those feedback components. By analyzing 88 English-written peer-reviewed articles published in/after 2022 from five databases, this review aims to synthesize empirical findings and offer evidence-based guidelines for effective implementation based on the MISCA model. The results revealed the following gaps regarding different types of GenAI feedback messages, multiple ways of GenAI feedback implementation, various contextual factors influencing GenAI feedback practices and several aspects of student characteristics, potentially showing the relationships between the four

	feedback components. Regarding the Message component, studies mainly focused on the constructive component and less on the cognitive component, while the affective component was seldom addressed. Regarding the Implementation component, studies were mainly about writing tasks and learning outcomes, while students' perceptions received less attention. Regarding the Context component, studies focused on educational settings and feedback design, while "classroom climate" was still underrepresented. Regarding the Student characteristics component, studies focused on students' cognitive/motivational factors, while "demographic factors" still did not receive adequate attention. The findings can extend our understanding of the current research and practices related to GenAI feedback for writing tasks in higher education. Suggestions for further research and practices are provided. *Keywords: Artificial Intelligence; Feedback; GenAI; GenAI feedback; Higher education; Writing tasks*

Abstracts 17 April, 4C Paper presentations

15:30 h	**4C Paper presentation, Ruppert 114**
Chair	*Liesbeth Kester*
	***Presenter*: Lorenz Boeckhorst** *Discussant:* Nynke Geus; Gerhard Stoel **Title: Rolling Dice in Parsimony: Cultivating Playful Tree-Thinking in Secondary Biology Education** *Authors: L.M.F. Boeckhorst, R.P. Verhoeff, I.E. Oosterheert, E. Barendsen, P.A.J.M. Coppen*
	Understanding phylogenetic trees - or tree-thinking - is central to grasping evolutionary theory. Various misconceptions hinder students' use of phylogenetic trees. To address these challenges, this study adopts a learning-through-play approach. We designed Parsimony, a board game that immerses biology students in an inquiry context of paleontological reasoning. The game prompts students to reconstruct cladograms, simplified phylogenetic trees emphasizing species' relative relatedness. Expert-like practices are encouraged by incrementally integrating randomly 'discovered' beetle species. Using an Educational Design Research approach, we tested two groups of upper-biology level students (3 students each, ages 16-18) and two classes (of 13 and 21 students). Video and audio recordings, student worksheets, and interviews with students and teachers were analyzed by adopting coding schemes for tree-thinking and playfulness. Findings indicate that embedded challenges foster expert-like activities: students discussed undefined trait annotations, implemented trait loss and developed heuristics for partial parsimony. Playfulness was notable and productive when maintained, with groups continuing the narrative, students imagining and predicting possible undiscovered species, and groups aligning their thinking to come to shared solutions. When play context collapsed, learning opportunities diminished. We conclude that successful immersion in a well-scaffolded play environment can cultivate tree-thinking for secondary biology students. This study contrasts previous research suggesting to present students predefined algorithms. The approach shows promise for other thinking skills in biology education (e.g. systems thinking). Further

	research could explore how transfer of such thinking skills from 'magic circle' to domain specific ontology can be strengthened. *Keywords: Evolution, Tree-thinking, playfulness, educational board-game, biology education*
16:00 h	**4C Paper presentation, Ruppert 114**
Chair	*Gerhard Stoel*
	***Presenter*: Nynke Geus** *Discussant:* Lorenz Boeckhorst; Liesbeth Kester **Title: Ethical inquiry within and across social studies disciplines** *Authors: Geus, N; Stoel, G; Rombout, F; Visser, H; Savenije, G; Meijer, P.C.*
	Addressing and exploring ethical questions through dialogue (hereafter referred to as ethical inquiry) is gaining ground in educational curricula, and can be meaningfully implemented across school subjects when aligned with subject-specific content and learning (e.g., Nucci et al., 2015; Nucci & Ilten-Gee, 2021; Schuitema et al., 2008). This study explores how ethical inquiry manifests in different social studies perspectives (historical, economic, geographical, art-historical, and socio-political) and examines similarities and differences between them. Given that these perspectives are underexplored in the literature, we mapped current practices, perceived challenges, and aspirations through fifteen semi-structured interviews with social studies teacher educators from five Dutch universities. The findings offer insights for cross-perspective learning and may inform the future development of tailored tools and strategies to support ethical inquiry in social studies education. *Keywords: Ethical Inquiry, Social studies education, Dialogic Education*

Abstracts 17 April, 4D Paper presentations

15:30 h	**4D Round Table, Ruppert 032**
Chair	*Mylene van der Scheer*
	***Presenter*: Magdala Rafael** *Discussant:* Geerte Savenije **Title: Challenges in the Core Elements of Education: Major Impact on Classroom Practice and Reading Literacy of Young Children in Curacao.** **Mapping core conditions for effective early literacy instruction in Curaçao.** *Authors: M.Rafael*
	The conversation at this round table will address sub-study 2. This study forms part of a broader PhD project investigating the relationship between teachers' instructional practices and the development of early reading skills among students in group 2 (kindergarten) to 5 (grade 3), ages 5–10, in primary education in Curaçao. The main objective of the research is to improve the quality of reading education by providing a deeper understanding of teachers' instructional practices and students' reading skills. Sub-study 2 is based on the 5 T's of the Early Grade Reading Framework (Bulat et al., 2017), as adapted by Spaull (2019). This framework identifies five core elements essential for effective early literacy instruction: Teaching, Training, Tongue, Texts, and Tests. This framework is modified to include

	the core element Time, addressing the structural shortage of instructional time in primary education in Curaçao. Sub-study 2 aims to map the current conditions and possible existing potential gaps in these six core elements essential to effective early literacy instruction in primary education in Curaçao, from the perspective of educational practice. It also examines how these conditions influence teachers' instructional practices. A mixed-method research design with a primarily descriptive purpose is used to address the research question in sub-study 2. Approximately 35 semi-structured interviews will be conducted, and an online structured questionnaire will be administered to about 375 teachers in groups 2 to 5. The quantitative and qualitative data are collected independently, analysed separately, and subsequently integrated methodologically to enable a coherent descriptive interpretation of the findings. In the general discussion of the dissertation, the results of sub-study 2 will be discussed by exploring potential relationships with the results from sub-study 1, which studies the instructional practices of teachers and the reading abilities of students in group 2 (kindergarten) through group 5 (grade 3). At the roundtable conversation, we will discuss possible strategies and methods for integrating interview and questionnaire results, as well as for synthesising them in the general discussion. *Keywords: Early literacy* *Reading instruction* *Teachers' instructional practices* *Curacao*
16:00 h	**4D Round Table, Ruppert 032**
Chair	*Mylene van der Scheer*
	***Presenter*: Rene Streutker** *Discussant:* Geerte Savenije **Title: Incoming and outbound: understand relationships between Change Labs and their surroundings using Mixed Methods Social Network Analysis** *Authors: Rene Streutker, Thomas Teekens, Siebrich de Vries, Marco Mazereeuw*
	Introduction Three university-school partnerships participate in a project exploring ways to strengthen student agency. Change Labs (CLs) are being used and researched. CLs are based on the principles of Cultural Historical Activity Theory (CHAT). CHAT focuses on how people in socio-material networks collectively develop work activities and, as a result, develop themselves. To map and understand these dialectical networks, we use mixed methods social network analysis (MMSNA). A key component of CLs is the diffusion of new ways of thinking and working further within the (school) organization. However, this diffusion proves difficult in practice and is only studied to a limited extent. We therefor asked the following research question: How and to what extent are ways of thinking about student agency and resulting ways of working spreading within the university-school partnerships? Method Whole network questionnaires were administered to all participants of the three CLs over a three-year period. We then selected participants with relevant network

	positions for in-depth interviews, with the aim to reflect on the meaning and nature of their collaborative relations in and outside of the CL. The Network questionnaires were analyzed descriptively and visualized. The in-depth interviews are thematically analyzed. Analysis Preliminary results show that participants primarily utilize existing network structures. In-depth discussions within the CL and concrete new opportunities emerging from it stimulate dissemination, while factors such as available time and management support hinder it. Round table During the round table, the outcomes of the thematic analysis of the interviews will be presented and participants will be asked to discuss the constructed model with the aid of questions concerning the found themes and their (theoretical) meaning and possible practical implications. *Keywords: Cultural Historical Activity Theory; Mixed Methods Social Network Analysis; Concentric Circle Method; Change Labs*

Abstracts 17 April, 4E Round Table discussions

15:30 h	**4E Round Table, Ruppert 029**
Chair	*Benji van Beurden*
	Presenter: **Rachel Reynolds** *Discussant:* Marieke Thurlings **Title: Self-Regulated Learning in Problem-Based Learning: Exploring SRL Competency and Approaches in Health Professions Education Tutors** *Authors: Rachel Reynolds, Felicitas Biwer, Anique de Bruin, Louise David, Diana Dolmans*
	Self-regulated learning (SRL) is essential for success in health professions education (HPE), where students – and later professionals – are expected to manage their own learning in response to complex educational and clinical demands. SRL is central to effective learning in problem-based learning (PBL) environments. Within PBL, teachers act as tutors who guide rather than lead learning processes, offering greater opportunities to support student SRL. However, the extent to which tutors perceive and enact this role remains unclear. This exploratory mixed-methods study examined HPE-PBL tutors' SRL-related knowledge, beliefs, and experiences, their perceived roles in supporting SRL, and the barriers and facilitators shaping their use of SRL-supportive strategies. A newly-developed questionnaire was completed by 48 tutors at a Dutch university, assessing SRL knowledge, beliefs, attitudes, and self-efficacy for supporting SRL. Follow-up semi-structured interviews with 15 questionnaire respondents further explored tutors' experiences, role perceptions, and challenges in supporting SRL. Questionnaire data were descriptively analyzed with preliminary results included below; interview data will undergo inductive thematic analysis with results to follow. By triangulating findings, this study aims to inform the development of SRL-focused faculty development initiatives that better align with tutors' diverse needs and practice contexts. At the roundtable session, attendees are invited to engage in the ongoing interview coding process. Attendees will collaboratively review selected interview excerpts

	and conduct a rapid thematic analysis in small groups. By inviting fresh perspectives on the data, this interactive session aims to remain open to new interpretations while critically examining existing ones, further enriching the analytic process. *Keywords: Self-regulated learning, Higher education, Health professions education, Effective teaching, Mixed methodology*

16:00 h	**4E Round Table, Ruppert 029**
Chair	*Benji van Beurden*
	***Presenter*: Anoeska van den Noort** *Discussant:* Marieke Thurlings **Title: Team learning in primary education in the Netherlands - A mixed methods study on the role of leadership** *Authors: Anoeska van den Noort, Nienke Hingstman, Piety Runhaar, Anje Ros*
	This round table sessions explores how school leaders in Dutch primary education enhance team learning within their schools, using a mixed methods study. The study combines survey data from school leaders (n=20) and teams (from 12 schools) with in-depth interviews (15 school leaders; teams from 6 schools) to examine leadership characteristics, perceptions, and behaviors that contribute to team learning. A key analytical challenge in research design is to make the connection between quantitative survey results and qualitative interview insights sufficiently explicit. The session invites participants to reflect on methodological strategies to enhance transparency, coherence and analytical robustness in this study. Insights from this discussion will support the refinement of the study's analytical approach and strengthen the interpretation and integration of quantitative and qualitative findings. *Keywords: Team learning; School leadership; Mixed methods study*