

ico Spring School 2024

Programme & Abstracts

ico

Interuniversitair Centrum voor Onderwijswetenschappen

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Version Wednesday, 17 April 2024

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Introduction

April 2024

Dear participants,

It is a great pleasure to welcome you all at Utrecht University for the ICO National Spring School on 18 and 19 April 2024.

The ICO National 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 off the NSS on Thursday the 18th of April with a keynote lecture by Christine Teelken on Post PhD-careers, 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 conference dinner. On Friday we start with three different workshops. During lunch there will be an information market, with different parties that will be of interest to all ICO members. Again, in the afternoon there will be PhD presentation sessions, after which we conclude the event with some drinks.

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

We are looking forward to meeting you all again!

The NSS 2024 organisation committee,

Anna Isahakyan (UM)
Benthe van Wanrooij (UvA)
Caroline Vonk (ICO)

How to reach the National Spring School?

The NSS will take place in the Marinus Ruppert Building 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. In the hall you can find the registration desk next to the catering buffet.

Address:

Marinus Ruppert building
Leuvenlaan 21
3584CE Utrecht

Programme ICO National Spring School 2024 – 18 April

Room:	Ruppert Hal	Ruppert Paars	Ruppert 005	Ruppert 031	Ruppert 032	Ruppert 011
Time:						
10:00-10:45	Welcome and registration					
10:45-11:00		Opening				
11:00-12:00		Keynote presentation				
12:00-13:00	Lunch: Meet your theme group					
13:00-15:00		Presentations 1A	Presentations 1B	Presentations 1C	Presentations 1D	Presentations 1E
		<i>Paper sessions</i>	<i>Paper sessions</i>	<i>Round Table session</i>	<i>Round Table session</i>	<i>Poster session</i>
15:00-15:30	Coffee/tea break					
15:30-17:00		Presentations 2A	Presentations 2B	Presentations 2C	Presentations 2D	Presentations 2E
		<i>Paper sessions</i>	<i>Paper sessions</i>	<i>Round Table session</i>	<i>Round Table session</i>	<i>Poster session</i>
18:00-22:00	Utrecht city centre: NSS2024 - dinner					

Programme ICO National Spring School 2024 – 19 April

Room: Time:	Ruppert Hal	Ruppert 011	Ruppert 005	Ruppert 029	Ruppert 031	Ruppert 032
9:30-10:00	Welcome and registration					
10:00-12:00			VIN Meeting	Workshop	Workshop	Workshop
				<i>Open Science and Pre-registration</i>	<i>The final steps – Preparing for the last phase of your PhD project</i>	<i>Cultivating Well-being and Motivation in Your PhD Journey</i>
12:00-13:00	Lunch + Information market					
13:00-14:00		Presentation session 3A	Presentation session 3B	Presentation session 3C	Presentation session 3D	Presentation session 3E
		<i>Paper sessions</i>	<i>Paper sessions</i>	<i>Paper sessions</i>	<i>Paper sessions</i>	<i>Round Table session</i>
14:00-14:30	Coffee/tea break					
14:30-15:30		Presentation session 4A	Presentation session 4B	Presentation session 4C	Presentation session 4D	Presentation session 4E
		<i>Paper sessions</i>	<i>Paper sessions</i>	<i>Paper sessions</i>	<i>Paper sessions</i>	<i>Round Table session</i>
15:30-16:30	Farewell drinks					

The Keynote – Christine Teelken (VU Amsterdam)

Post-PhD careers

18 April, 10:45-12:00 hours, Ruppert Paars

The system of doctoral education, leading up to the PhD-degree, has been transformed substantially, specially the last twenty years. Several international changes, for example the Bologna Process, affected the academic profession and involved greater precariousness of working conditions, combined with the growing importance of doctoral education for the labour market, given current societal issues. This resulted in an expansion of doctoral graduates' career paths beyond academia, including public, private, and non-profit sectors. About two-third of the PhD-graduates will find their employment outside Academia.

How prepared are you for such a career prospect? Whether you are in the first or last year of your PhD-trajectory, various questions may emerge, e.g. concerning transferable skills or networking. I will address these issues in my keynote speech.

[Christine Teelken](#) works as an associate professor at the Vrije Universiteit Amsterdam, the Netherlands.

Meet-your-theme-group-lunch session

18 April 12:00-13:00 hours, Ruppert hal

First get something to eat and drink – the lunch is fully vegetarian. A separate part of the buffet will be for people with other dietary wishes (allergies or vegan). 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 coordinators to meet with PhDs and fellows 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 NSS	Location Ruppert Hal
T1	Learning and Instruction	Michelle Helms-Lorenz	standing tables
T2	ICT and Education	Omid Noroozi & Reza Farrokhnia	standing table
T3	Workplace Learning	Elly de Bruijn & Christine van Nooijen	standing table
T4	Teaching and Teacher Education	Helma Oolbekkink-Marchand & Dineke Tigelaar	Room 031
T5	Domain Specific education and learning	Bjorn Wansink	standing table
T6	Educational Design and Curriculum development		Standing table
T7	Schools and the societal context of education		standing table
T8	Assessment, evaluation and examination	Liesbeth Baartman & Judith Gulikers	standing table
T9	Higher Education	Yvette Baggen & Renske de Kleijn	Room 032

Conference Dinner

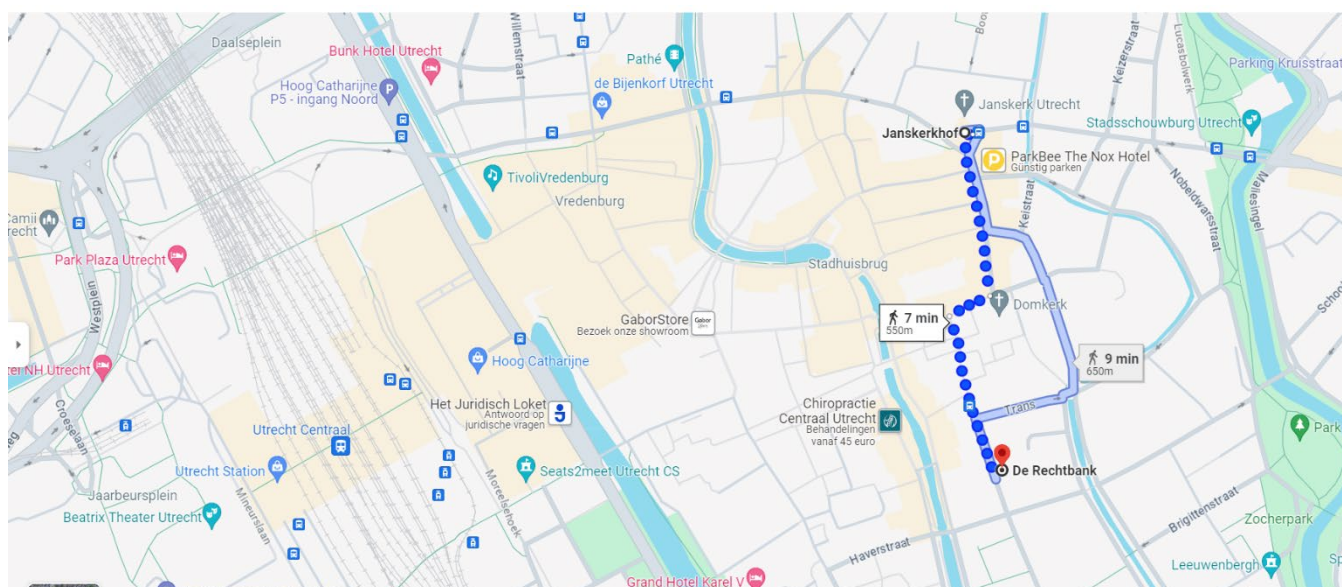
18 April, 18:00 - 22:00 hours, – De Rechtbank

Have you registered for the Conference Dinner? Then you are welcome to join us at restaurant “De Rechtbank” at 18:00 hours. Dinner will be served around 18:30 hours.

How to reach the conference dinner?

Address: Korte Nieuwstraat 14, 3512 NM Utrecht

Every 7 minutes, you can take bus 27 or 28 from bus stop “Heidelberglaan” (direction Utrecht centrum) and get off at the Janskerk. From there it is just a short walk to the restaurant (6 minutes)



Workshop Open Science and Pre-registration

Huib Tabbers (EUR) & Mario de Jonge (UL)

19 April, 10:00-12:00 hours, – Ruppert 029

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:

Jonne	Bloem
Josien	Boetje
Femke	Borst
Agnes	Brinks
Irene	Douwes
Melis	Dülger
Luyao	Huang
Anna	Isahakyan
Andrienne	Kerckhoffs
Femke	Koekkoek
Guus	Lambert
Florence	Lucas
Jane	Pieplenbosch
Simone	Polderdijk
Brittney	Root
Marieke	Thurlings
Linda	Zenger

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

Joost Jansen in de Wal (UvA)

19 April, 10:00-12:00 hours, – Ruppert 031

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:

Sietse	Brands
Quentin	Brouhier
Daan	Buijs
Wenjun	Cai
Xingshi	Gao
Eveline	Gerretsen
Sabrine	Hassane
Yujia	Hong
Cheng	Hua
Femke	Koekkoek
Amber	Kornet
Minke	Krijnen
Jiajia	Li
Ha	Nguyen
Yolande	Potjer
Jennifer	Schijf
Lucas	Silva
Mireille	Smits
Samantha	Vos
Luxi	Wang
Chenjie	Yang

Workshop Cultivating Well-being and Motivation in Your PhD Journey

Aisha Iqbal Ruiz (UM) & Piermarco Consiglio (RUG)

19 April, 10:00-12:00 hours, – Ruppert 032

Workshop Objectives:

- Introduce key concepts of Self-Determination Theory (SDT) and the Demands Induced Strain Compensation Recovery (DISC-r) model.
- Introduce general wellbeing and wellbeing at work. Reflect on the relationships between psychological needs and motivation, components of work, and well-being.
- Engage in a guided reflective exercise to assess your own well-being and motivation as a PhD student.
- Identify one actionable step to promote well-being and intrinsic motivation during your academic journey.

Agenda:

Introduction: Welcome and brief overview of the workshop's objectives.

Session 2: Reflecting on Your PhD Journey

Session 3: Strategies for Enhancing Well-being

Q&A and closing

Participants:









Julianne	De Leeuwe
Nynke	Douma
Claudia	Gomes
Svenne	Groeneweg
Rowan	Haen
Marga	Harmanto
Luyao	Huang
Boukje	Lindijer
Weiwei	Liu
Ilse	Maessen
Marco	Marcellis
Janine	Mommers
Eleanor	Rowan
Tom	Schoemaker
Mattias	Theys
Cassandra	Tho
Marlon	Van De Put
Mirthe	Van Den Hee
Nina	Van Graafeiland
Christine	Van Nooijen

Information market

19 April, 12:00 – 13:00 hours, – Ruppert hal

During lunch on Friday there will be a small information market.

First get something to eat and drink – the lunch is fully vegetarian. A separate part of the buffet will be for people with other dietary wishes (allergies or vegan). After you have filled your plate, you can talk to various parties that are of interest to our ICO members, either during your research project or as a future employer:

	Nationaal Regieorgaan Onderwijs onderzoek Steffie Boon, Carmen Modder and collegae	www.nro.nl
	Proefschriftmaken Jeroen van der Houwen and Ben Riezouw	www.proefschriftmaken.nl
	Studio Wetenschap Liza Cornet	www.inpressacademy.com https://www.linkedin.com/in/lizacornet/
	Citolab Lientje Maas and colleague	https://cito.nl/onderzoek-innovatie/
	TNO Pauline Zuidema and Dana Ravestein	https://www.tno.nl/nl/veilig/operaties-menselijke-factoren/
	Ridderprint Robert Kanters	https://www.ridderprint.nl/
	Kohnstamm Instituut Koen Rosema and colleague	https://kohnstamminstituut.nl/
	VOR and VPO Renate Wesselink & Lisette Wynia	https://www.vorsite.nl/en

The presentation sessions

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

The session starts with a short pitch): 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

Depending on the session, the presenter has 5 (poster and round table) to 10 (paper) minutes to present their work, followed by a discussion in the group. The discussion is started by the discussant(s). The presenters of a poster session should attach their poster on the poster boards in room Ruppert 011 before the session starts. Presenters of a round table session need to bring hand-outs to give to the audience during the session.

Presenters of the paper session need to bring their presentation on their laptop. Connection cables will be present in the room. Do bring your own adapter if you do not have a HDMI-connection, just to be sure you can connect it to the projecting device.

Information for the Chair of a Session

The main task of a chair is to moderate the session: you will introduce the presenter, the discussants and the presentation feedback form. During the presentation and the discussion afterwards you will keep track of time. As mentioned above, for all paper presentation sessions we have assigned two discussants to give PhD candidates the opportunity to practice their future role as a discussant.

As a chair you will lead the discussion and involve the audience. The chair should facilitate the discussion to make sure participants get an opportunity to participate in the discussion. The chair should also ensure that in the paper sessions, the PhD candidate will act as the first discussant and the ICO Fellow as the second discussant.

For the Round table discussions you are asked to read the short paper, so you can start the discussion if the audience needs encouragement to involve themselves in the discussion.

A feedback form will be handed out during the presentation to collect feedback on the way in which the candidate presented his PhD project. After the session, make sure all feedback forms are collected, and returned to the presenter.

Information for Discussants

As a discussant in a paper or poster session it is your role to give constructive and supporting feedback to the presenter on the content of their work. In order to be able to do so, you will receive a paper or an extended abstract of the work the PhD-candidate is going to present. Please keep in mind that the PhD-candidates possibly present their research (in English) for the first time, and that this can be a challenging experience for them. Try to formulate your feedback in a constructive manner and provide the presenters with stimulating advice, so they can continue their research with new ideas and fresh motivation.

There is only limited time for discussion after the paper presentations with a maximum about 5 minutes per discussant. This means you have to be concise. For instance, raise one issue about the

main results and discuss this issue with the presenter and the audience. Minor points concerning the paper can be exchanged in written comments or by discussing them after the session. All presentations and discussions will be in English.

Schedule presentation sessions

Session 1, Thursday 18 April

	Paper presentation 1A	Paper presentation 1B	Round Table 1C	Round Table 1D	Poster Presentation 1E-1
13:00 h	Ruppert Paars	Ruppert 005	Ruppert 031	Ruppert 032	Ruppert 011
Chair	<i>Elisa Kupers</i>	<i>Ellen Kok</i>	<i>Jacqueline Wong</i>	<i>May Lee</i>	<i>Indira Day</i>
	Presenter: Chenjie Yang <i>Discussant: Lucas Silva; Nivja de Jong</i>	Presenter: Florence Lucas <i>Discussant: Xiangyuan Feng; Michelle Helms- Lorenz</i>	Presenter: Christine van Nooijen	Presenter: Linlin Pei	Presenter: Julianne de Leeuwe <i>Discussant: Marieke Meeuwisse</i> Presenter: Jonne Bloem <i>Discussant: Marieke Meeuwisse</i> Presenter: Stephan Venmans <i>Discussant: Marieke Meeuwisse</i>
13:30 h					
Chair	<i>Elisa Kupers</i>	<i>Ellen Kok</i>	<i>Jacqueline Wong</i>	<i>May Lee</i>	<i>Discussant: Marieke Meeuwisse</i>
	Presenter: Lucas Silva <i>Discussant: Chenjie Yang; Nivja de Jong</i>	Presenter: Xiangyuan Feng <i>Discussant: Florence Lucas; Marieke Thurlings</i>	Presenter: Margaretha Harmanto	Presenter: Richard Kragten	Presenter: Nynke Douma <i>Discussant: Tessa Mearns</i> Presenter: Tisja Korthals Altes <i>Discussant: Tessa Mearns</i>
14:00 h					Poster Presentation 1E-2
Chair	<i>Elisa Kupers</i>	<i>Ellen Kok</i>	<i>Jacqueline Wong</i>	<i>Despoina Georgiou</i>	<i>Kevin Ackermans</i>
	Presenter: Irene Douwes-van Ark <i>Discussant: Linda Zenger; Arnoud Korneef</i>	Presenter: Sabrine Hassane <i>Discussant: Morteza Saadatourvahid; Ridwan Maulana</i>	Presenter: Xian Liu	Presenter: Svenne Groeneweg	Presenter: Femke Borst <i>Discussant: Erika Schlatter</i> Presenter: Andrienne Kerckhoffs <i>Discussant: Erika Schlatter</i> Presenter: Yujia Hong <i>Discussant :Erika Schlatter</i>
14:30 h					
Chair	<i>Elisa Kupers</i>	<i>Ellen Kok</i>		<i>Despoina Georgiou</i>	Presenter: Marije Eradus <i>Discussant: Hanna Westbroek</i> Presenter: Teuntje van Heese <i>Discussant: Hanna Westbroek</i> Presenter: Mirtha Van den Hee <i>Discussant: Hanna Westbroek</i>
	Presenter: Linda Zenger <i>Discussant: Irene Douwes-van Ark; Arnoud Korneef</i>	Presenter: Morteza Saadatpourvahid <i>Discussant: Sabrine Hassane; Ridwan Maulana</i>		Presenter: Guus Lambert	

Session 2, Thursday 18 April

15:30 h	Paper presentation 2A Ruppert Paars	Paper presentation 2B Ruppert 005	Round Table 2C Ruppert 031	Round Table 2D Ruppert 032	Poster Presentation 2E Ruppert 011
Chair	<i>Marieke Thurlings</i>	<i>Roeland van der Rijst</i>	<i>Mario de Jonge</i>	<i>Monika Louws</i>	<i>Seyyed Kazem Banihashem</i>
	Presenter: Quentin Brouhier <i>Discussant: Yolande Potjer; Piety Runhaar</i>	Presenter: Gabrielle Martins van Jaarsveld <i>Discussant: Samantha Vos; Omid Noroozi</i>	Presenter: Josien Boetje	Presenter: Janine Mommers	Presenter: Rowan Haen <i>Discussant: Marloes Hendrickx</i> Presenter: Nina van Graafeiland <i>Discussant: Marloes Hendrickx</i> Presenter: Melis Dülger <i>Discussant: Martine Baars</i> Presenter: Luyao Huang <i>Discussant: Martine Baars</i> Presenter: Fieke Ophuis-Cox <i>Discussant: Martine Baars</i>
16:00 h					
Chair	<i>Marieke Thurlings</i>	<i>Roeland van der Rijst</i>	<i>Mario de Jonge</i>	<i>Monika Louws</i>	
	Presenter: Yolande Potjer <i>Discussant: Quentin Brouhier; Piety Runhaar</i>	Presenter: Samantha Vos <i>Discussant: Gabrielle Martins van Jaarsveld; Kim Stroet</i>	Presenter: Mattias Theys	Presenter: Marlon van de Put	
16:30 h					
Chair			<i>Mario de Jonge</i>	<i>Monika Louws</i>	
			Presenter: Luxi Wang	Presenter: Cheng Hua	

Session 3, Friday 19 April

13:00 h	Paper presentation 3A Ruppert 011	Paper presentation 3B Ruppert 005	Paper presentation 3C Ruppert 029	Paper presentation 3D Ruppert 031	Round Table 3E Ruppert 032
Chair	<i>Marjolein Dobber</i>	<i>Shahab Jolani</i>	<i>Pantelis Papadopoulos</i>	<i>Chiel van der Veen</i>	<i>Isabel Raemdonck</i>
	Presenter: Daan Buijs <i>Discussant: Jiajia Li; Christa Krijgsman</i>	Presenter: Weiwei Liu <i>Discussant: Jennifer Schijf; Frans Prins</i>	Presenter: Xingshi Gao <i>Discussant: Mireille Smits-van der Nat; Gert Rijlaarsdam</i>	Presenter: Ilse Maessen <i>Discussant: Simone Polderdijk; Monique Volman</i>	Presenter: Judith Rotink
13:30 h					
Chair	<i>Marjolein Dobber</i>	<i>Shahab Jolani</i>	<i>Pantelis Papadopoulos</i>	<i>Chiel van der Veen</i>	<i>Isabel Raemdonck</i>
	Presenter: Jiajia Li <i>Discussant: Daan Buijs; Gonny Schellings</i>	Presenter: Jennifer Schijf <i>Discussant: Weiwei Liu; Joost Jansen in de Wal</i>	Presenter: Mireille Smits- van der Nat <i>Discussant: Xingshi Gao; Pantelis Papadopoulos</i>	Presenter: Simone Polderdijk <i>Discussant: Ilse Maessen; Monique Volman</i>	Presenter: Tom Schoemaker

Session 4, Friday 19 April

14:30 h	Paper presentation 4A Ruppert 011	Paper presentation 4B Ruppert 005	Paper presentation 4C Ruppert 029	Paper presentation 4D Ruppert 031	Round Table 4E Ruppert 032
Chair	<i>Olle ten Cate</i>	<i>Renate de Groot</i>	<i>Anne de Bruijn</i>	<i>Jeroen Janssen</i>	<i>Tim Huijgen</i>
	Presenter: Anna Isahakyan <i>Discussant: Amber Kornet; Astrid Poorthuis</i>	Presenter: Femke Koekkoek <i>Discussant: Brittney Root; Sophie Oudman</i>	Presenter: Eveline Gerretsen <i>Discussant: Sietse Brands; Arnoud Evers</i>	Presenter: Ha Nguyen <i>Discussant: Wenjun Cai; Kevin Ackermans</i>	Presenter: Jane Pieplenbosch
15:00 h					
Chair	<i>Olle ten Cate</i>	<i>Renate de Groot</i>	<i>Anne de Bruijn</i>	<i>Jeroen Janssen</i>	<i>Tim Huijgen</i>
	Presenter: Amber Kornet <i>Discussant: Anna Isahakyan; Astrid Poorthuis</i>	Presenter: Brittney Root <i>Discussant: Femke Koekkoek; Sophie Oudman</i>	Presenter: Sietse Brands <i>Discussant: Eveline Gerretsen; Slavi Stoyanov</i>	Presenter: Wenjun Cai <i>Discussant: Ha Nguyen; Michelle Helms-Lorenz</i>	Presenter: Eleanor Rowan

Abstracts 18 April, 1A Paper presentations

13:00 <i>Chair</i>	Paper presentation 1A – Ruppert Paars <i>Elisa Kupers</i>
	Presenter: Chenjie Yang <i>Discussant: Lucas Silva; Nivja de Jong</i> Title: Exploring Chinese Students' Perceptions of Affordances and, Challenges and Their Related Coping Strategies in Intercultural Communication <i>Authors: Yang C.J., Popov V., Biemans H.J.A.</i>
	<p>Challenges faced by Chinese students in Intercultural communication encounters are well documented, but these challenges still remained to be addressed. This study implemented a qualitative method to explore Chinese students' perceptions of affordances, challenges, and related coping strategies under personal interaction, group work, and class contexts by exploring their individual experiences of intercultural communication. Interpretative phenomenological analysis was employed to understand 22 Chinese international students' personal intercultural communication experiences in multicultural classroom settings at a Dutch university. The qualitative data suggested that low communication efficiency, classroom culture shock, and power imbalance are always challengeable to Chinese students, and emergent need is generally regarded as an affordance. In contrast, atmosphere, subjective preferences, task-led behaviors, self-assessment, passive communication, and talk size are the factors may perceive as both challenges and affordances by Chinese students in different situations. To address challenges and affordances, although a few of participants tried to adapt themselves via observation and reflection, the coping strategies used by Chinese students are mostly language centered. We conclude that the single strategy and the absence of student-centered learning skills are the main reasons for Chinese students to have less interactions with others in multicultural classroom settings.</p> <p><i>Keywords: intercultural communication competence, multicultural classroom, affordance, intercultural communication challenge, higher education</i></p>
13:30 <i>Chair</i>	Paper presentation 1A – Ruppert Paars <i>Elisa Kupers</i>
	Presenter: Lucas Silva <i>Discussant: Chenjie Yang; Nivja de Jong</i> Title: Perceptions of PLC coordinators about attributes to implement and scale a program to improve teaching quality <i>Authors: Silva, Lucas; Schildkamp, Kim; Visscher, Adrie; Bosker, Roel</i>
	<p>Several recommendations exist about effective mechanisms for teacher professional development programs. However, designing an evidence-based teacher professional development program does not imply that its users will adopt it as expected. We designed a program to improve teaching quality using students' perceptions of teaching quality via professional learning communities. We investigated PLC coordinators' perceptions about the attributes necessary for implementing and scaling the teacher professional development program, as suggested by Educational Design Research (McKenney & Reeves, 2019). Particularly,</p>

	<p>we explored how PLC coordinators perceived the added value, compatibility, clarity, and tolerance of the teacher professional development program. 17 schools and 47 teachers participated in the program. Preliminary results from the 11 interviews conducted with PLC coordinators showed that they positively perceived the four attributes of the teacher professional development program. However, only two schools completed the program. We explored and discussed why this teacher professional development program failed in the implementation, despite positive perceptions on the attributes suggested by Educational Design Research literature.</p> <p><i>Keywords: teaching quality, teacher professional development, educational design research</i></p>
14:00	Paper presentation 1A – Ruppert Paars
Chair	<i>Elisa Kupers</i>
	<p>Presenter: Irene Douwes-van Ark <i>Discussant: Linda Zenger; Arnoud Korneef</i></p> <p>Exploring university teachers’ teaching approaches and self-efficacy beliefs <i>Authors: Irene Douwes-van Ark, Marjon Fokkens-Bruinsma, Jan Folkert Deinum, Hanke Korpershoek</i></p>
	<p>University teachers’ teaching approaches are important since they are related to students’ learning. Self-efficacy beliefs are presumably required for the uptake of effective teaching approaches, in which teacher-centered and student-centered approaches can simultaneously be included. We aim to identify different teaching approaches profiles, and subsequently provide insight into differences in teachers’ self-efficacy beliefs across these profiles. In total, 312 university teachers filled out a survey entailing the Approaches to Teaching Inventory (ATI) and the UNiversity Teacher Self-efficacy Scale (UNITSS). Latent profile analysis was used to identify teaching approaches profiles. An analysis of variance was used to investigate differences in self-efficacy beliefs. We found four different teaching approaches profiles, from which three included moderate or high student-centered approaches. The findings further demonstrate that teachers who include student-centered teaching approaches also have higher levels of self-efficacy beliefs. These findings will support the identification of different university teachers’ profiles.</p> <p><i>Keywords: teaching approaches; self-efficacy beliefs; university teachers</i></p>
14:30	Paper presentation 1A – Ruppert Paars
Chair	<i>Elisa Kupers</i>
	<p>Presenter: Linda Zenger <i>Discussant: Irene Douwes-van Ark; Arnoud Korneef</i></p> <p>Title: Towards Measuring Students’ Autonomy Regulation Strategies as Part of Their Motivation Regulation <i>Authors: L. Zenger, B. Flunger, T. van Gog</i></p>
	<p>University students regularly struggle with their motivation. This is problematic because motivation is strongly associated with academic achievement and well-being. According to Self-Determination Theory, motivation comprises a set of regulation styles directing students’ engagement. Within this set, intrinsic and identified regulation have been found to be more advantageous for academic outcomes than introjected and extrinsic regulation. Intrinsic and identified</p>

	<p>regulation can be fostered through autonomy support. Yet, university students often cannot rely on support from others. While working independently, students can apply motivation regulation strategies, e.g., mastery self-talk, to enhance their motivation. Two motivation regulation strategies that have been investigated in prior research, could be seen as autonomy regulation. Students may also apply further autonomy-regulating strategies. However, although autonomy support has received a lot of attention, whether students use autonomy-regulating strategies on their own has hardly been explored. Here, we investigated if five additional autonomy-regulating strategies (providing oneself with choices, taking one's own perspective, acknowledging one's own feelings, displaying patience towards oneself, and using invitational self-talk) can be confirmed empirically and differentiated from established motivation regulation strategies. Moreover, we investigated the associations between autonomy-regulating strategies and distinct types of motivation, as part of motivation regulation. In two samples with university students (N=221, N=155), confirmatory factor analyses showed that the autonomy-regulating strategies could be empirically distinguished. Using structural equation models, we found that only displaying patience towards oneself was positively associated with identified regulation. Considering all strategies together, mastery self-talk showed the most robust associations with outcomes in both samples.</p> <p><i>Keywords: motivation, autonomy regulation, higher education, CFA</i></p>
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Abstracts 18 April, 1B Paper presentations

13:00	Paper presentation 1B Ruppert 005
Chair	<i>Ellen Kok</i>
	<p>Presenter: Florence Lucas Discussant: Xiangyuan Feng; Michelle Helms-Lorenz</p> <p>Title: Selecting Learning Tasks for Oneself or A Fictitious Peer: Effects on Students' Accuracy, Cognitive Load, Challenge/Threat, and Self-Efficacy Authors: Florence Lucas, Eva Janssen, Vincent Hoogerheide, Barbara Flunger, Jelmer Prinsen, & Tamara van Gog</p>
	<p>Effective self-regulated learning with problem-solving tasks requires that students accurately assess their performance and select suitable next tasks, but many students struggle with this. Fortunately, these skills can be trained through video modeling examples. Trained students showed more accurate self-assessments and task-selection decisions, and because of that showed higher learning outcomes after a self-regulated learning phase. However, there was room for improvement overall, suggesting a need for additional practice, and a lot of variability within the trained group, suggesting that the training was more effective for some students than for others. In the current study, we tested whether students were better able to apply the trained task-selection principles to others than to themselves, and whether this potential effect could be explained by cognitive (i.e., mental effort) and motivational mechanisms (i.e., challenge/threat). Also, we tested whether the effects of our self/other manipulation were dependent on students' level of self-efficacy. Students first received the training, after which they were asked to apply the trained task-selection skills in two practice blocks, in which they selected new tasks for themselves in the first block and for (fictitious) other students in the second block. As expected, our study showed that students were more accurate at selecting tasks for others than they were for themselves, indicating that students</p>

	<p>indeed were less able to apply the trained task-selection principles to themselves. However, this effect was not explained by any of our hypothesized mediating variables (i.e., mental effort, challenge/threat). Interestingly, students with low self-efficacy experienced more threat, whereas high self-efficacy students felt more challenged when choosing tasks for themselves than for others. Furthermore, our exploratory analyses showed that there was only an advantage of choosing tasks for others relative to choosing tasks for oneself at the more complex tasks.</p> <p><i>Keywords: Self-regulated learning; Problem-solving tasks; Peers; Challenge/threat; Mental effort; Self-efficacy</i></p>
13:30	Paper presentation 1B Ruppert 005
Chair	<i>Ellen Kok</i>
	<p>Presenter: Xiangyuan Feng <i>Discussant: Florence Lucas; Marieke Thurlings</i></p> <p>Title: Navigating the Early Career Landscape: Unpacking the Role of Induction in Nurturing Beginning Teachers' Love for the Profession <i>Authors: Xiangyuan Feng, Michelle Helms-Lorenz, Ridwan Maulana</i></p>
	<p>This study disentangles the nuanced role of various characteristics of induction arrangements in shaping beginning teachers' intrinsic professional orientations during their initial two career years. These orientations include teachers' professional meaningfulness, affection for teaching and for the subject, and self-efficacy for instruction, classroom management, and student engagement. Additionally, the study considers the effects of teacher characteristics and the existence of distinct teacher subgroups characterized by unique developmental profiles of these orientations. A longitudinal survey involving 280 Dutch teachers was conducted at three time points to measure their perceptions of the induction support received, covering workload reduction, enculturation, professional development, classroom observation and coaching, and support for self-regulated learning. Results from latent growth modeling reveal that induction element quantity plays a more influential role in accounting for changes in teachers' intrinsic orientations compared to element quality and comprehensive induction characteristics (length, quantity, and quality). This effect is particularly pronounced when considering teachers' heterogeneous motivational-affective profiles. Furthermore, the impact of induction varies in terms of direction and strength across different teacher orientations and subgroups. These findings illuminate the complexity of the induction influence and emphasize the necessity of exploring induction properties, contexts, and teacher heterogeneity in greater detail.</p> <p><i>Keywords: teacher induction, beginning teachers, intrinsic motivational-affective traits, latent growth modeling</i></p>
14:00	Paper presentation 1B Ruppert 005
Chair	<i>Ellen Kok</i>
	<p>Presenter: Sabrine Hassane <i>Discussant: Morteza Saadatourvahid; Ridwan Maulana</i></p> <p>Title: A mixed-method study on social emotion and emotion regulation during online collaboration. <i>Authors: Sabrine Hassane, Maartje Henderikx, Jorrick Beckers, Karel Kreijns</i></p>

	<p>During collaborative learning students may encounter socio-emotional challenges which may affect the social emotions they feel towards each other. These emotions influence their behavior and interactions within the group harming their psychological safety, communication, and relationships. To cope with this impact, emotion regulation is needed. This is particularly the case in online distance settings, where communication tools may limit the interaction. However, knowledge on how to regulate emotions during online collaborations is scant. Our aim is to investigate which socio-emotional challenges students encounter, which social emotions it evokes and how students regulate their emotions. We employed a mixed-method sequential explanatory design using a questionnaire and interviews. Successful collaborations triggered positive emotions and were characterized by common goals, workstyles, and standards. Conversely, in unsuccessful collaborations students experienced different socio-emotional challenges, which gave rise to negative social emotions. Students applied different strategies to regulate their emotions before and during the collaboration. Before collaboration, they tried to select familiar students to form groups with. During socio-emotional challenges, they considered the costs and gains of any confrontation or attempted to change the undesired situation. In avoiding confrontation, students became passive, detached from the group and unmotivated to collaborate. Furthermore, the perception of social presence seemed to low during socio-emotional challenges. In conclusion, this study provides rich information about emotion regulation during online distance collaborations from students' perspectives. These findings inform the design of interventions that support emotion regulation in the context of online collaboration.</p> <p><i>Keywords: Computer-supported collaborative learning, Social emotions, Emotion regulation, Mixed-method research</i></p>
14:30	Paper presentation 1B Ruppert 005
Chair	<i>Ellen Kok</i>
	<p>Presenter: Morteza Saadatpourvahid <i>Discussant: Sabrine Hassane; Ridwan Maulana</i></p> <p>Title: EFL/ESL teachers' level of occupational stress and teacher immunity. Individual and Organizational differences <i>Authors: Saadatpourvahid, M.; Wilfried, A.; Tiggelar</i></p>
	<p>This mixed-methods study investigated the occupational stress levels and immunity of 251 English as a Foreign Language (EFL) teachers, alongside exploring the impact of biographical characteristics on these variables. Quantitative analyses, including Pearson product-moment correlation coefficients and MANOVA tests, were supplemented by qualitative interviews. Results revealed high stress levels and lower immunity among EFL teachers, with a significant positive correlation between stress and immunity. Specific stress components demonstrated varying correlations with immunity, with "Maintaining Relationships" showing the strongest association. Age exhibited weak but significant correlations with both stress and immunity, while professional experience primarily impacted immunity. Gender and marital status did not significantly influence stress or immunity levels. However, academic level showed differences in perceived stress, particularly among PhD-level teachers. Additionally, linguistic background significantly affected immunity levels, with no significant impact on stress. These findings emphasize the complex interplay of</p>

	<p>occupational stress, immunity, and biographical characteristics among EFL teachers, suggesting potential avenues for targeted interventions to support teacher well-being and effectiveness.</p> <p><i>Keywords: EFL Teachers' Stress, Teacher Immunity, Occupational Stress, EFL, ESL, Language Teaching</i></p>
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Abstracts 18 April, 1C Round Table discussions

13:00	Round Table 1C Ruppert 031
<i>Chair</i>	<i>Jacqueline Wong</i>
	<p>Presenter: Christine van Nooijen</p> <p>Title: Expert-novice scaffolding in practice: help me design a live EMME intervention</p> <p><i>Authors: Christine van Nooijen, Bjorn de Koning, Maryam Asoodar, Anna Isahakyan, Ellen Kok, Fred Paas</i></p>
	<p>The eye movement modelling example, henceforth referred to as EMME, is an instructional material that combines expert eye movements and narration. By making the eye movements of experts visible, EMMEs can assist novices in learning how to interpret complex visual materials. Although research over the past decade has investigated the effectiveness of EMMEs in various visual learning scenarios, to our knowledge no research has been published regarding the implementation and effectiveness of live (real-time) EMMEs. We aim to design and implement a live EMME, and contrast this with both the effectiveness of video EMMEs and traditional instruction. During this roundtable, we will discuss settings, parameters and constraints associated with designing such an intervention, and we look forward to your input and thoughts on how we can best develop the live EMME concept.</p> <p><i>Keywords: eye tracking, EMME, gaze signalling, instructional design, expert novice learning</i></p>
13:30	Round Table 1C Ruppert 031
<i>Chair</i>	<i>Jacqueline Wong</i>
	<p>Presenter: Margaretha Harmanto</p> <p>Title: investigating students' self regulation and experiences of collaboration in online language learning</p> <p><i>Authors: Margaretha Dharmayanti Harmanto, Nadira Saab, Jaap Schuitema, Dineke Tigelaar</i></p>
	<p>This study is part of a larger study aimed at designing and evaluating an intervention to enhance students' SRL strategies in online collaborative language learning in English-speaking classes. This study explores students' self-regulated learning (SRL) and their collaboration experiences during an online language learning course. This study involved a survey study. The participants were 142 students in English classes in higher education in Indonesia. Data were obtained using a questionnaire on self-regulated online learning and students' collaboration experience. The result of the study showed that for self-regulated learning, the students perceived themselves as having good metacognitive skills in general ($M=5.24$, $SD=0.70$), indicated that the students on average, considered themselves to be reasonably competent in</p>

	<p>metacognitive regulation. Although there still might be room for improvement. The means for all the metacognitive skills and environmental structuring scales were above 5. Students reported slightly lower time management; the mean value was 4.8 (SD=1.02). In terms of collaboration, group activity indicated moderate results. Therefore, an interesting group activity that can engage students to work collaboratively would be the consideration in designing the intervention.</p> <p><i>Keywords: self-regulated learning, collaboration, online language learning, survey study.</i></p>
14:00	Round Table 1C Ruppert 031
Chair	<i>Jacqueline Wong</i>
	<p>Presenter: Xian Liu</p> <p>Title: Students' perceptions on the relation between programmatic assessment and self-regulated learning</p> <p><i>Authors: Xian Liu, Diana Dolmans, Maryam Asoodar, Zhien Li, and Daniëlle Verstegen</i></p>
	<p>Background</p> <p>Programmatic assessment (PA) is being implemented widely, but it comes with challenges. It is thought to enhance self-regulated learning (SRL), but it is not clear if and how this works with a diverse student population. So far, PA has been implemented mainly in in full-time, institution-based undergraduate curricula. Therefore, the research question comes as follows: How and why does PA enhance or hinder students' SRL in a diverse student group in a mainly online curriculum?</p> <p>Summary of work</p> <p>This study explored the perspective of students enrolled in the Master of Health Professions Education (MHPE) from Maastricht University, a part-time, predominantly online master's program for healthcare professionals from all over the globe. Data were collected using a mixed-methods approach, combining a questionnaire (n= 42) and semi-structured interviews (n=14). Descriptive statistics were computed for quantitative questionnaire results. Open questions and verbatim transcripts of the interviews were analyzed employing thematic analysis with sensitizing concepts from theories of self-regulated learning and programmatic assessment.</p> <p>Summary of results</p> <p>In the quantitative results, mean scores range from 3.56 to 4.23 (scale1-5, 5 being positive). Authentic learning tasks, the availability of electives, and coaching were perceived as highly positive (mean scores 4.10, 4.18, 4.23), while feedback and e-portfolio were perceived as moderately positive (3.56 and 3.71). In the qualitative results, main themes evolved around: having to get used to PA, the importance of structured coaching in facilitating self-reflection, varied interpretations and ways of making use of feedback, and evolving personal expectations toward the curriculum.</p> <p>Discussion and conclusion</p> <p>This study gave us insight in what students need to self-regulate learning: a portfolio, options for electives, and feedback (although students use feedback in different ways). These elements come together when students have to self-reflect on their progress in meetings with their coach or at high-stake decision moments. Students' ideas and expectations of programmatic assessment change over time,</p>

	<p>and especially students who have not been exposed to programmatic assessment before need time to adapt.</p> <p>The discerned themes offer valuable insights for refining the implementation of PA to foster SRL and can support educational institutions, currently employing or contemplating the integration of PA elements into their curricula. The implications extend notably to online learning environments and cater to the needs of a diverse student population.</p> <p><i>Keywords: programmatic assessment; self-regulated learning; mixed methods; coaching; feedback; health professions education</i></p>
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Abstracts 18 April, 1D Round Table discussions

13:00	Round Table 1D Ruppert 032
Chair	<i>May Lee</i>
	<p>Presenter: Linlin Pei</p> <p>Professional development for promoting a sense of community in blended learning</p> <p><i>Authors: Linlin Pei</i></p>
	<p>PLEASE BE ADVISED THAT THIS IS THE CONCEPTUAL VERSION, CURRENTLY UNDER REVIEW. IT IS CONFIDENTIAL, THEREFORE, PLEASE REFRAIN FROM DISTRIBUTING, REUSING, OR SHARING WITHOUT PERMISSION FROM THE AUTHORS.</p> <p>Abstract: While blended learning holds considerable potential in higher education, suboptimal social interactions among students may lead to feelings of loneliness, isolation, and demotivation. To address this issue, a professional development intervention was designed and assessed for its viability in helping university teachers promote a sense of community within the blended learning environment. This intervention introduces a new visually-based theoretical model, equipping teachers with practical tools for implementing activities that foster a strong sense of community in the blended learning setting. Drawing upon the teachers' perceived experiences, the study identifies key recommendations to enhance the viability of this professional development intervention. In particular, it is necessary to establish a strong theoretical foundation to dispel misconceptions among teachers about blended learning and sense of community. Additionally, it provides several concrete strategies to support teachers' hands-on practice and suggests integrating a team-based approach to collectively enhance the quality of blended learning. Furthermore, the study underscores the importance of the institution's commitment, recognizing its important role in the long-term success and sustainability of both blended learning and associated professional development initiatives for teachers.</p> <p><i>Keywords: Sense of community, blended learning, teacher, professional development, higher education, qualitative</i></p>
13:30	Round Table 1D Ruppert 032
Chair	<i>May Lee</i>

	<p>Presenter: Richard Kragten</p> <p>Title: Multisource Feedback as a catalyst for Reflective Dialogue aimed at teacher development in Professional Learning Communities</p> <p><i>Authors: Richard Kragten; Danny Kostons; Daniel van Middelkoop; Jan-Willem Strijbos</i></p>
	<p>Feedback and reflective dialogue are powerful tools for teacher development. By sharing educational experiences within Professional Learning Communities (PLCs), teachers can support each other in refining their teaching skills. This study investigates the use of multiple sources of feedback ('Multisource Feedback'; MSF) as a driving force for reflective dialogue within PLCs. Before empirically examining this integration, a conceptual framework was developed through an integrative literature review with a purposeful sampling strategy. It has been found that (a) MSF is essential for promoting critical thinking and in-depth conversations in reflective dialogue, and (b) continuity, support, and an inquiring attitude in these dialogues contribute to an increased acceptance of MSF, especially when power dynamics are acknowledged. The integration of MSF into reflective dialogues clearly has the potential to support responsible action and teacher development within PLCs, which can result in improved educational practices. The conceptual framework will be discussed through a roundtable discussion.</p> <p><i>Keywords: PLC, reflective dialogue, feedback</i></p>
14:00	<p>Round Table 1D Ruppert 032</p>
Chair	<p><i>Despoina Georgiou</i></p>
	<p>Presenter: Svenne Groeneweg</p> <p>Title: Value creation by university teachers engaging in Scholarship of Teaching and Learning</p> <p><i>Authors: Svenne Groeneweg; Natalie Pareja Roblin; Daphne van Weijen; Monique Volman</i></p>
	<p>Scholarship of Teaching and Learning (SoTL) represents an area of scholarship in which university teachers systematically investigate their own teaching practices, and share their insights with the academic community. The purpose of SoTL is to better understand and improve teaching and learning in higher education (Boyer, 1990). While attention to SoTL has increased in both research and practice (Tight, 2017), there is relatively little empirical research examining the impact of SoTL from the perspective of teachers engaged in it (Healey & Healey, 2023; Trigwell, 2013). The aim of this study is to understand the value that teachers attribute to SoTL as they participate in a SoTL program.</p> <p>Participants of the same professional development program or community of practice may experience its value in varied ways. Earlier research suggests that the value that participants themselves attach to their experiences is particularly relevant to study as it is the driving force for continuity and sustainability of their efforts (Dingyloudi et al., 2019), and lays a strong foundation to elevate these to higher levels (Mohd-Yusof & Samah, 2022).</p> <p>Semi-structured interviews with 15 university teachers participating in a SoTL program were conducted. Their experiences were analyzed thematically using a coding scheme based on Dingyloudi et al.'s (2019) value creation framework.</p>

	<p>Round-table participants will be invited to reflect on how the value creation framework can be used to investigate the impact of SoTL from the perspective of teachers engaging in it. Quotes from the interviews will be discussed to examine the different types of value teachers attributed to their experiences with SoTL and to check the clarity and reliability of the coding scheme. If time allows, we can also discuss what patterns have emerged from the data, and potential implications for the paper.</p> <p><i>Keywords: Scholarship of Teaching and Learning (SoTL); value creation; teacher research; teacher professionalization</i></p>
14:30	Round Table 1D Ruppert 032
Chair	<i>Despoina Georgiou</i>
	<p>Presenter: Guus Lambert</p> <p>Title: Higher education teachers' use of cognitive principles to enhance instructional pedagogy</p> <p><i>Authors: Guus Lambert, Hanneke Theelen, Gino Camp</i></p>
	<p>Teaching based on insights from educational science is important because we want students to learn effectively. Important aspects of teaching are teachers' knowledge about how people learn, and knowledge about pedagogy/instruction. This knowledge includes knowledge about cognitive principles that enhance instructional pedagogy. Although extensive research has been conducted into these cognitive principles, higher education teachers seem insufficiently familiar with (empirical evidence for) cognitive principles that can enhance instruction. We do not have clear insights into which principles higher education teachers do and do not know, believe in, and apply to enhance their instructional pedagogy. In this research project we, therefore, focus on the development of higher education teachers' knowledge, beliefs, and application of cognitive principles to enhance instructional pedagogy in daily practice, and how an effective professional development program for higher education teachers should be designed to develop the knowledge, beliefs, and skills to apply these principles in daily practice. Educational design research is used as a backbone for all studies in this research project. This first part of the research project covers an analysis and exploration of the literature and educational practice with the aim of answering the following sub-questions through a literature review, questionnaire, and focus group: (1) Which cognitive principles drawn from cognitive load theory, cognitive theory of multimedia learning, and the desirable difficulties framework, which can improve instructional pedagogy, have sufficient empirical support in the context of higher education according to the literature? (2) What is higher education teachers' knowledge level of these cognitive principles, what are their beliefs regarding them, and how do they apply these principles into their daily teaching practices?</p> <p><i>Keywords: Instruction, cognitive psychology, higher education, professional development program</i></p>

Abstracts 18 April, 1E-1 and 2 - Poster presentations

13:00	Poster Presentation 1E-1 Ruppert 011
Chair	<i>Indira Day</i>

	<p>Presenter: Julianne de Leeuwe Discussant: Marieke Meeuwisse</p> <p>Title: High Expectations in Higher Education Authors: Julianne de Leeuwe</p>
	<p>Teachers play a crucial role when it comes to students' achievements. One of the most effective ways they make a difference is by their verbal and non-verbal communication of expectations. Teachers' expectations of their students appear to have a major influence on students' learning outcomes. This works both ways: high expectations have a positive effect on the achievement of students, low expectations have a negative effect. This phenomenon has been described as the self-fulfilling prophecy, where the positive effect is referred to as the Pygmalion effect, and the negative effect as the Golem effect.</p> <p>Research has demonstrated that teachers behave differently towards students for whom they have high expectations rather than low. They create a warm psychosocial learning environment, give more positive feedback, introduce them with more challenging contents and questions, and provide more opportunities for them to showcase their abilities. Low expectations teachers amongst others will give more negative feedback, will give less time to answer, and provide less learning opportunities and experiences. Ergo, communicating high expectations will not only lead to better achievements, it will also lead to a higher degree of involvement, (intrinsic) motivation, and self-efficacy. Showing low expectations will on its turn have a negative impact.</p> <p>Although there is scientific consensus on high expectations and its effects, most of the research has been done in primary and secondary education. Whether these findings can be transferred to higher education is yet to be determined. In line with recommendations from previous research, the purpose of this research is twofold: 1) to establish a clear definition of (high) teacher expectations in higher education; 2) to develop a validated measuring instrument for teacher expectations in higher education.</p> <p>The foundation is there, time to build on and fill the knowledge gaps. You are warmly invited to engage in the poster presentation!</p> <p><i>Keywords: High Expectations, Higher Education, Survey Construction</i></p>
13:00	Poster Presentation 1E-1 Ruppert 011
Chair	<i>Indira Day</i>
	<p>Presenter: Jonne Bloem Discussant: Marieke Meeuwisse</p> <p>Title: (De)Motivating Teaching for Students from Diverse Backgrounds and the Role of Teachers' Expectations Authors: Jonne Bloem, Lisette Hornstra, and Kim Stroet</p>
	<p>According to Self-Determination Theory (SDT) all students, regardless of their (cultural) background, benefit from motivating teaching practices. Yet, previous research suggests that teachers vary in the extent to which they provide (de)motivating teaching toward particular students, like students from different SES and ethnic backgrounds. This may be due to differences in teachers' expectations for these students. Therefore, in this study we examine the extent to which teachers have different expectations for students from diverse ethnic and socioeconomic backgrounds, and whether this relates to differences in (de)motivating teaching practices. To do this, we collected data from 68 teachers</p>

	<p>and their 1176 students. Preliminary results based on pilot data (N = 92 teachers and their 247 students) show that teachers have lower expectations for students from lower SES than for students from higher SES backgrounds, while their expectations did not differ based on migration background. Additionally, lower expectations were related to teachers adopting fewer motivating strategies and more demotivating strategies. For most (de)motivating strategies there were no direct relationships with student background. These findings demonstrate how teachers' expectations play a role in their behavior, providing insights into how their presumably well-intentioned actions can either enhance or undermine students' motivation and performance.</p> <p><i>Keywords: (De)motivating teaching, Equitable opportunities, Teacher expectations</i></p>
13:00 <i>Chair</i>	<p>Poster Presentation 1E-1 Ruppert 011</p> <p><i>Indira Day</i></p>
	<p>Presenter: Stephan Venmans Discussant: Marieke Meeuwisse</p> <p>Title: Student Insight into Controversial Histories: Student Ability to Analyze and Contrast Arguments <i>Authors: Stephan Venmans, Saskia Arbon, Carla van Boxtel, Jaap Schuitema, Tessa van Schijndel, Geerte Savenije</i></p>
	<p>National and international educational goals increasingly call for teaching controversies in History. Although the last decades of research have brought forward invaluable best practices and guidelines for teachers and students, the students' competency to understand the core disagreement of societal controversies itself remains overlooked. To what extent can a student (aged 15) understand controversies in their own terms?</p> <p>This study aims to provide insight into the extent to which student are able to distinguish and compare knowledge and value-based claims in socio-historical controversies. The task in this study exhibits relevant skills that were iteratively developed from both literature review and task-based interviews with 15 year-old students (N=21) and controversy-oriented educational specialists (N=20). The finalized task was then implemented across the Netherlands, measuring student understanding of disagreements (N=650). The task features vignettised discussions between different perspectives on current history-based controversies that that have different salience for students (the role of the US government regarding 9/11, commemorating the abolition of slavery, reconsiderations on statues of national heroes, and the Dutch government's response to Srebrenica).</p> <p><i>Keywords: Controversy, Argumentation, Dilemmas, Values, Perspective, History Education</i></p>
13:00 <i>Chair</i>	<p>Poster Presentation 1E-1 Ruppert 011</p> <p><i>Indira Day</i></p>
	<p>Presenter: Nynke Douma Discussant: Tessa Mearns</p> <p>Title: Public Value at Risk? Supplementary and Shadow Education at Dutch</p>

	Secondary Schools <i>Authors: N.H. Douma, M.J. Warrens, A. Zuurmond</i>
	<p>Since the turn of the century there has been considerable expansion of shadow education in the Netherlands. Shadow education was historically most visible in Asia but is now strongly visible in Europe as well. Within the last decade, activities such as homework guidance, tutoring and exam training have become ‘normal’ educational activities. About a third of all pupils in Dutch secondary education use shadow education. Shadow education has also become increasingly intertwined with the educational programmes of publicly funded schools and an increasing number of secondary education schools has structural collaborations with providers of shadow education. The extra resources made available to schools by the Dutch government to reduce educational disadvantages due to COVID-19 measures, have further intensified these collaborations.</p> <p>One of the aims of this project is therefore to give an overview of the scope and forms of (external) shadow education and (internal) supplementary education. This presentation focuses on the qualitative data collection of the project. Semi-structured (group)interviews were conducted with 23 educational professionals from 11 school teams. The sample of school teams represents schools from both rural and urban areas of the country and schools offering different tracks of secondary education.</p> <p>Notable results are that many schools use some forms of internal or external supplementary education, mostly financed by the funding for covid-related disadvantages. Many schools chose to make or keep their supplementary education internal, rather than work with external suppliers. Additionally, educational professionals were asked about the perceived positive and negative aspects about supplementary education and their normative perspectives. Many educational professionals are critical about external, and to a lesser extent internal, supplementary education. This study expands on existing knowledge on shadow education, gives an overview of supplementary education inside of schools and gives insight into the vision of educational professionals on supplementary education.</p> <p><i>Keywords: Shadow Education, Teacher perspective, Interviews</i></p>
13:00 <i>Chair</i>	Poster Presentation 1E-1 Ruppert 011 <i>Indira Day</i>
	<p>Presenter: Tisja Korthals Altes <i>Discussant: Tessa Mearns</i></p> <p>Title: Teachers and students on Inclusive Higher Education: a questionnaire and interview study in the Netherlands <i>Authors: Korthals Altes, Tisja; Willemse, Martijn; Goei, Sui Lin; Ehren, Melanie.</i></p>
	<p>The student population in the Dutch Higher Education (HE) is becoming increasingly diverse. This changing student population raises the question of how to provide education for current and future student populations. HE-teachers play an important role in realizing inclusive HE. However, studies on HE-teachers’ views, images, and opinions on inclusion, in short, their understanding, are almost absent</p>

	<p>in the academic literature.</p> <p>The primary objective of this paper is to report on a study that aims to gain more insight into HE-teachers' understanding of inclusive education, while simultaneously considering their institutional context. The participants in this survey study were HE-teachers and last-year students from eight study programs spread across four HEIs in the Netherlands. The survey was designed for this study and consisted of both open- and close-ended questions. It is based on existing surveys in the field of inclusive education, which were adapted to the Dutch higher education context and a broad definition of inclusive education, and on the outcomes of a systematic literature review of the same subject. This resulted in 35 questions divided into five parts: (1) connection to their HEI; (2) images of inclusive HE; (3) implementation of inclusive practices; (4) responsibility of their HEI; and (5) background information. With the outcomes from this survey, we aim to reduce the knowledge gap on HE-teachers' understanding of inclusive HE and to contribute to realizing inclusive HE for their students. The latter aids in more equity in HE, while also preparing students to work together in a diverse society. Follow-up research based on the outcomes are on in-depth (group)interviews and interventions at the specific HEIs participating in this study and generalizability of the designed instruments.</p> <p><i>Keywords: Inclusive education, Higher education, Equity, Teacher views, Survey</i></p>
14:00	Poster Presentation 1E-2 Ruppert 011
Chair	<i>Kevin Ackermans</i>
	<p>Presenter: Femke Borst <i>Discussant: Erika Schlatter</i></p> <p>Title: Through Different Eyes: Associations Between Teacher, Student and Peer Perceptions of Need-Supportive Teaching and Student Outcomes <i>Authors: Borst, F., Hornstra, L., Flunger, B.</i></p>
	<p>According to self-determination theory, teachers can boost the motivation and academic performance of their students by supporting their three basic psychological needs – autonomy, competence, and relatedness. Need support can be provided through autonomy support, structure, and involvement. Often, need support occurs in dyadic (1-on-1) interactions between the teacher and the student. Previous research indicates that the need support provided by teachers in these dyadic interactions is difficult to measure accurately. Specifically, the perceptions of teachers and students regarding the provided need support only show low correspondence. This could be due – amongst other reasons – to variations in the level of need support provided by teachers among students in the same class. The aim of this study is to address limitations of teacher reports and student reports on need-supportive teaching by exploring perceptions of peers on need-supportive teaching as a unique supplementary perspective. Interactions between teachers and students often occur in the presence of peers in the classroom, who could therefore potentially serve as informants. Since peers constitute a large group of informants, combining their perspectives may mitigate the biases of the individual students and teachers involved in the dyadic interaction. By integrating this unique perspective of peers into the investigation of dyadic teacher-student interactions, differences in need-supportive teaching can potentially be further elucidated, and student outcomes may be more accurately predicted. To achieve this, we examine how the reports of peers, teacher reports, and student self-reports are related to one another and to what extent the reports of peers have unique predictive value beyond student and teacher perceptions for students' motivation, engagement, and</p>

	<p>academic performance. This research may contribute to the development of new instruments for investigating dyadic teacher-student interactions within the framework of self-determination theory, and potentially also to the advancement of instrumentation for educational practice.</p> <p><i>Keywords: multi-informant, self-determination, need-supportive teaching, primary education</i></p>
14:00	Poster Presentation 1E-2 Ruppert 011
<i>Chair</i>	<i>Kevin Ackermans</i>
	<p>Presenter: Andrienne Kerckhoffs <i>Discussant: Erika Schlatter</i></p> <p>Title: LAMMP: A layered model for multimedia assessment <i>Authors: Kerckhoffs, A.M.H.; Janssen, J.P.W., Pat-El, R.J.; Jarodzka, H.</i></p>
	<p>The widespread adoption of computer-based assessment has increased multimedia use in assessments, potentially leading to enhanced authenticity, accessibility, and validity. However, despite recognition of the impact of multimedia design on cognitive processing and outcomes, clear design guidelines are lacking. Research in this field is inconclusive, partly because comparison of empirical findings to date is hampered by inconsistencies in definition and operationalization of variables investigated. To address this, we developed LAMMP: a layered model for multimedia assessment, incorporating concepts from multimedia learning, test design, visual design, and cognitive psychology. LAMMP distinguishes four layers, Learning and assessment context, Assessment item, MultiMedia, and Pictorial representation. Each layer identifies key variables affecting the (cognitive) process of resolving a multimedia assessment item. By considering variables like purpose, pictorial content, and layout of multimedia in a layered model, LAMMP aims at theoretical clarification to facilitate cross-study comparison, thereby facilitating the development of multimedia assessment design guidelines.</p> <p><i>Keywords: Multimedia Assessment - Multimedia effect in testing - Test design</i></p>
14:00	Poster Presentation 1E-2 Ruppert 011
<i>Chair</i>	<i>Kevin Ackermans</i>
	<p>Presenter: Yujia Hong <i>Discussant: Erika Schlatter</i></p> <p>Title: Approaches and game elements used to tailor digital gamification for learning: A systematic literature review <i>Authors: Yujia Hong; Nadira Saab; Wilfried Admiraal</i></p>
	<p>The systematic review examined research on tailored digital gamification for learning based on 43 peer-reviewed articles published between 2013 and 2022. The study aimed to investigate tailored approaches and game elements, contributing to the use of tailored digital gamification in educational settings. The tailored approaches were categorized as personalization, adaptation, and recommendation, with user modeling as their basis. Five clusters of game elements were employed when using these tailored approaches in digital gamified classes. The findings imply that most of the articles in this review were still in the stage of class preparation and focused on what information can be used to tailor. More empirical studies need to be conducted to examine the motivating effects of tailored digital gamifying classes,</p>

	<p>using the approaches of personalization, adaptation, and recommendation. Additionally, twenty-three game elements were found in this review study, among which reward was the most often used. Then these game elements were grouped into five clusters based on their functions, that is, performance, personal, social, ecological, and fictional cluster. A variety of game element clusters reflect multiple aspects of gamification. The use of them in each tailored approach might contribute to a better understanding and selection of game elements when tailoring digital gamification. These findings provide a holistic picture of common approaches and related game elements in tailored digital gamifying classes. Teachers and curriculum designers can benefit from this study by considering appropriate approaches and game elements.</p> <p><i>Keywords: Tailored digital gamification; Teaching and learning; Tailored approach; Game elements and clusters; Systematic literature review</i></p>
14:00	Poster Presentation 1E-2 Ruppert 011
Chair	<i>Kevin Ackermans</i>
	<p>Presenter: Marije Eradus <i>Discussant: Hanna Westbroek</i></p> <p>Title: Tensions experienced by novice university teachers and how they learn from them: An interview study <i>Authors: Marije Eradus, Loes de Jong, Natalie Pareja Roblin, Monique Volman</i></p>
	<p>Novice university teachers face many challenges and often have to perform new tasks, without any formal preparation or education in teaching. The initial teaching period can be stressful and uncertain, but can also provide learning opportunities. Previous research in primary and secondary education suggests that (novice) teachers may experience several tensions in their teaching. Yet, research on the tensions experienced by higher education teachers are still scarce and little is known about how these tensions contribute to teachers' professional learning. This study explores the tensions experienced by novice university teachers and what and how they learn from them. Data were collected through semi-structured in-depth interviews with 15 novice university teachers. Preliminary results show that novice university teachers' tensions concern different themes and relate to different levels. Learning from tensions can result in specific knowledge, skills and attitudes. The results also illustrate the different activities through which novice university teachers learn: learning by doing, reflecting, talking to or asking advice from others. Insights from this study contribute to improving the support offered to novice university teachers by, for example, strengthening the connection between the needs of this group of teachers and their professionalization opportunities. Participants of the presentation are invited to reflect on the interpretation of the results and data-analysis, such as how the results (proposed themes and examples of tensions) relate to the definition of tensions in the literature, and/or what (other) themes of tensions they believe emerge from the data.</p> <p><i>Keywords: Novice teachers, Tensions, Professional learning, Higher Education, Interviews</i></p>
14:00	Poster Presentation 1E-2 Ruppert 011
Chair	<i>Kevin Ackermans</i>

	<p>Presenter: Teuntje van Heese <i>Discussant:</i>Hanna Westbroek</p> <p>Title: Capturing the Dynamic Nature of Motivating Teaching: the Validation of a Real-time Observation Instrument <i>Authors: Teuntje van Heese, dr. Lisette Hornstra, dr. Heleen Pennings, dr. Kim Stroet</i></p>
	<p>Students' motivation for school plays a vital role in their wellbeing, engagement, and achievement. Therefore, it is essential to investigate how teachers can stimulate their students' motivation. Following self-determination theory, research has already shown that need-supportive teaching practices, including autonomy support and providing structure, can foster motivation. Need-thwarting teaching, such as controlling or chaotic teaching, can undermine motivation. Yet, these studies addressed the motivational practices as interindividual differences within relatively large time-intervals. Teaching practices, however, tend to fluctuate from moment to moment. Hence, the current study aims to develop an integrative and fine-grained method by which both inter- and intra-individual differences in teachers' motivational behavior can be accurately captured. We adopt a micro-analytical approach by validating whether the Continuous Assessment of Interpersonal Dynamic joystick method (Pennings et al., 2014; Sadler et al., 2009) can be adjusted to code observations of need-supportive and need-thwarting teaching practices. Thereby, we examine whether the motivational practices can be coded in real-time, along the two dimensions of the circumplex model of (de)motivating teaching (structure-chaos and autonomy-control) (Aelterman et al., 2019). An observation guide will be developed based on literature and expert meetings. Three coders will be trained to code based on this observation guide. We use existing video and survey data, collected among 489 Dutch pre-vocational education (VMBO) students and their teachers (n = 40). We will assess internal validity by examining whether the observations form a circular structure. Construct validity will be determined by comparing the real-time codes with teachers' and students' perceptions of the motivational practices and with previously given (non-micro) observation codes. Predictive validity will be determined based on associations with students' motivation. By validating this instrument, we aim to develop a method by which accurate insights into the role of teachers in students' motivation can be obtained.</p> <p><i>Keywords: motivation, self-determination theory, observation, joystick</i></p>
14:00	Poster Presentation 1E-2 Ruppert 011
<i>Chair</i>	<i>Kevin Ackermans</i>
	<p>Presenter: Mirthe Van den Hee <i>Discussant:</i>Hanna Westbroek</p> <p>Insights into the guidance and facilitation of students in living lab education <i>Authors:</i></p>
	<p>Living labs are relatively new learning environments where students learn self-directed and work on authentic, complex themes in co-creation with the professional field. How can students be (better) guided and facilitated in their switching to a sufficiently self-managing mentality and in dealing with the uncertainty of wicked problems? This question is investigated and analyzed during a six-month pilot case study.</p> <p><i>Keywords: living lab-education, student guidance, pilot case study, mixed methods</i></p>

Abstracts 18 April, 2A Paper presentations

15:30	Paper presentation 2A, Ruppert Paars
<i>Chair</i>	<i>Marieke Thurlings</i>
	<p>Presenter: Quentin Brouhier <i>Discussant: Yolande Potjer; Piety Runhaar</i></p> <p>Title: Phenomenological Exploration of the Late-career Phase in Early Childhood Education: Navigating Singular Challenges Through the Lens of Teachers' Personal Resources and Professional Learning <i>Authors: Quentin Brouhier, Virginie März and Isabel Raemdonck</i></p>
	<p>This study explored early childhood teachers' experience of the late career phase in the French-speaking part of Belgium (N=24). Inspired by the job demands-resources model, this study draws on two-steps semi-structured interviews to examine specific job characteristics at stake in this phase, investigate how early childhood teachers in late career phase mobilize their accumulated personal resources, and how they incorporated challenges and successes that they faced throughout their career. The findings reveal the particular demands and resources inherent to the profession, as well as how participants utilize their personal resources to address them. Additionally, the paper explores the diverse dynamics related to professional development at various career stages. Furthermore, the implications for practitioners and policymakers, along with limitations and avenues for future research, are examined in detail.</p> <p><i>Keywords: Late-career Teachers, Early Childhood Education, Qualitative Research, Phenomenology, Personal Resources, Job Demands-resources</i></p>
16:00	Paper presentation 2A, Ruppert Paars
<i>Chair</i>	<i>Marieke Thurlings</i>
	<p>Presenter: Yolande Potjer <i>Discussant: Quentin Brouhier; Piety Runhaar</i></p> <p>Title: Teacher growth in a professional development programme historical reasoning in primary schools <i>Authors: Yolande Potjer, Marjolein Dobber, Carla van Boxtel</i></p>
	<p>This study reports on the ways in which a professional development (PD) programme results in change in teachers' knowledge, attitudes, and practice. The programme taught primary school teachers to reason historically and develop skills to design inquiry-based lessons for historical reasoning. The programme was tailored to participants' needs, promoting teacher agency in inquiry and implementation. It consisted of fifteen 2.5-hour meetings spread over two school years.</p> <p>Teacher development was monitored through:</p> <ul style="list-style-type: none"> - in-depth individual interviews (pre and post) - interactions between participants in recorded PLC meetings <p>The model at the basis of the study and analysis is the Interconnected model of teacher professional growth (Clarke & Hollingsworth, 2002). Analysis focused on individual development trajectories and a description of change sequences and growth networks that indicate teacher change during the programme. The interviews indicated that a combination of professional experimentation (engaging</p>

	<p>in historical inquiry, searching and using historical sources when designing lessons and bringing lessons into practice), information and stimuli of external sources (modelling historical inquiry by the facilitator, connecting theory about historical reasoning and inquiry to teachers' experiences during experimentation) and seeing positive outcomes in pupils was fruitful. Examples of growth networks are provided that show how teachers gained more knowledge of historical reasoning and pedagogic approaches to promote it in students and made changes in their practice.</p> <p><i>Keywords: teacher professional development – primary teachers – historical reasoning – inquiry-based learning</i></p>
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Abstracts 18 April, 2B Paper presentations

15:30	Paper presentation 2B, Ruppert 005
<i>Chair</i>	<i>Roeland van der Rijst</i>
	<p>Presenter: Gabrielle Martins van Jaarsveld <i>Discussant: Samantha Vos; Omid Noroozi</i></p> <p>Title: Goal Setting and Academic Performance: Using a Conversational Agent to Support SRL Processes for Higher Education Students <i>Authors: Gabrielle Martins van Jaarsveld, Jacqueline Wong, Martine Baars, Marcus Specht, Fred Paas</i></p>
	<p>As technology has become more commonplace in higher education it has highlighted the importance of self-regulated learning skills for students in modern educational settings. The presence of this technology has many benefits, allowing for the collection of large amounts of student data and the creation of digital, and personalised educational tools, but it also presents its own set of challenges. In the current project, we aim to answer the overarching question: how can learning analytics be leveraged to support self-regulated learning in higher education environments? With this aim in mind, we have built a conversational agent to carry out self-regulated learning interventions. These interventions are designed to scaffold the self-regulated learning cycle, and student interactions with the chatbot are used to inform the real-time metacognitive feedback offered about the quality of their self-regulated learning process. Initial findings from this project show that providing scaffolding and feedback during the goal setting phase of the self-regulated learning cycle improves the quality of the process but does not improve learning outcomes. In the upcoming study, we aim to extend the scaffolding and feedback intervention to later phases of the self-regulated learning cycle, to further improve students self-regulated learning processes, and thus indirectly, students' academic performance.</p> <p><i>Keywords:</i></p>
16:00	Paper presentation 2B, Ruppert 005
<i>Chair</i>	<i>Roeland van der Rijst</i>
	<p>Presenter: Samantha Vos <i>Discussant: Gabrielle Martins van Jaarsveld; Kim Stroet</i></p> <p>Distance learners are social too: investigating the relationship between self-regulated learning, basic needs, motivation, and student mental well-being</p>

	<i>Authors: S. G. Vos, Lisette Wijnia, R. L. Martens, R. H. M. de Groot</i>
	<p>This study took a person-centered approach to investigate the interplay between self-regulated learning (SRL) and related personal and contextual factors in adult distance education. Distance university students participated in a survey study (N = 1151) measuring self-regulated learning, confidence to self-regulate, navigating challenges to learning, basic psychological needs, motivation, and student mental well-being. Latent profile analysis revealed 5 profiles ranging from maladaptive (i.e., low/minimal SRL) to adaptive SRL practices (i.e., competent SRL). SRL profiles showed differences in social engagement, suggesting that while most students in this sample sought out contact with others, this practice is not related to more adaptive SRL in all students. Additionally, need satisfaction, SRL challenges, and SRL confidence were predictors of profile membership, but need frustration and motivation were not. Furthermore, SRL profile membership did not predict well-being in this sample. These findings illustrate how SRL manifests in distance learners and of the personal and contextual factors which can facilitate SRL, which is useful for teachers when designing SRL and needs-supportive online education.</p> <p><i>Keywords: self-regulated learning, self-determination, well-being, online learning</i></p>

Abstracts 18 April, 2C Round Table discussions

15:30	Round Table 2C, Ruppert 031
Chair	<i>Mario de Jonge</i>
	<p>Presenter: Josien Boetje</p> <p>Title: Enhancing Information Problem Solving Competence in Higher Education: Validating Design Principles</p> <p><i>Authors: Josien Boetje</i></p>
	<p>In the digital age, the ability to effectively navigate and use online information, known as Information Problem Solving (IPS) competence, is crucial for academic success (Catalano & Phillips, 2016; Rowe et al., 2021) and addressing complex societal issues. However, higher education students often lack the necessary skills for effective information retrieval and analysis, leading to reliance on inaccurate or biased sources (Frerejean et al., 2016; Rosman et al., 2015; Walraven et al., 2009). This gap underscores the need for systematic IPS skill development in educational curricula.</p> <p>In a previous systematic review we identified seven constructively aligned design principles for teaching IPS in higher education, encompassing learning tasks, instruction, activities, modeling, support, practice, and feedback (Boetje et al., 2024, under review). We validated the seven principles through focus groups with information specialists, primary and secondary educators, teacher educators, and teacher students. These preliminary engagements offered insights into the perceived usefulness, perceived ease of use, and current application of these principles in diverse educational settings. However, to further validate and refine these principles, a broader perspective from the research community is essential. This round table seeks to engage peer-researcher in a dialogue to evaluate the extent to which these principles are recognized as useful, easy to implement, and currently applied in higher education institutions. Additionally, it aims to explore</p>

	<p>identify any potential challenges and gaps.</p> <p>Our findings and the ensuing discussion will provide valuable insights for educators and policy makers, guiding the development of evidence-informed strategies for IPS teaching and learning in higher education and contributing to more informed and digitally literate future generations.</p> <p><i>Keywords: systematic review, design principles, information problem solving, information literacy</i></p>
16:00	Round Table 2C, Ruppert 031
Chair	<i>Mario de Jonge</i>
	<p>Presenter: Mattias Theys</p> <p>Title: What does adaptive expertise entail for clinical undergraduate medical students? A qualitative study</p> <p><i>Authors: Mattias Theys; Dr. Emmaline Brouwer; Dr. Daniëlle Verstegen; Prof. Dr. Pim Teunissen</i></p>
	<p>Current research on adaptive expertise focuses on professionals in the workplace. What adaptive expertise means for medical students in the context of their tasks is lesser known. This study investigates: How do clinical undergraduate medical students perceive their own adaptivity in their practice? An understanding of the perception of adaptivity by undergraduate medical students can help to support adaptive expertise development on the way to becoming a professional. This is a thematic qualitative study aiming to grasp the experiences of students in their daily practice. Semi-structured interviews took place with students from three different medical programs in Belgium, the Netherlands and Germany. Participants are recruited from the fifth or sixth year of a six-year medical undergraduate program. Thematic analysis is used to analyze data.</p> <p>For this round table presentation two questions concerning preliminary results will be prepared to discuss.</p> <p><i>Keywords: Adaptive expertise Medical students Student experience Student development</i></p>
16:30	Round Table 2C, Ruppert 031
Chair	<i>Mario de Jonge</i>
	<p>Presenter: Luxi Wang</p> <p>Title: Teaching Practices in Language Acquisition, Content Learning, and Integrated Learning in EMI, ESP, and CLIL Contexts</p> <p><i>Authors:</i></p>
	<p>In this round table session, we will discuss the teaching practices of CLIL, EMI, and ESP in higher education settings, categorizing these practices into language acquisition, content learning, and integrated learning.</p> <p>In the context of higher education, the integration of content and language learning</p>

	<p>has become a significant instructional model, especially in CLIL (Content and Language Integrated Learning), EMI (English-Medium Instruction), and ESP (English for Specific Purposes) practices. This instructional pattern aims to facilitate students' simultaneous acquisition of subject knowledge and language proficiency, thereby enhancing their abilities for learning and career development in cross-cultural and international environments. However, despite the potential of these instructional patterns in enhancing language acquisition, content learning, and integrated learning, there remain various frontline teaching practices that require further research and discussion in the classroom.</p> <p>My research focuses on exploring language acquisition, content learning, and integrated learning in CLIL, EMI, and ESP teaching practices within higher education settings. We adhered to the guidelines and principles outlined in the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analysis) 2020 statement, as well as the comprehensive explanation and elaboration provided by Page et al. (2021). A thorough literature search was conducted across a total of 814 electronic databases accessible through the Library of Leiden University. Ultimately, we selected 64 articles for review. Upon thorough examination and analysis of these articles, we identified 320 instances of teaching practices occurring in authentic classroom settings. Through in-depth study, analysis, and categorization, we aim to provide valuable insights and recommendations for teaching practices in higher education, thereby fostering comprehensive development in language acquisition, content learning, and intercultural communication for students.</p> <p><i>Keywords: Teaching Practices; Language Acquisition, Content Learning, Integrated Learning</i></p>
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Abstracts 18 April, 2D Round Table discussions

15:30	Round Table 2D, Ruppert 032
Chair	<i>Monika Louws</i>
	<p>Presenter: Janine Mommers</p> <p>Title: Professional identity and self-confidence of school leaders in interaction with professionals</p> <p><i>Authors: Janine Mommers, Piety Runhaar & Perry den Brok</i></p>
	<p>School leader shortages and the fact that school leaders feel ill-equipped in their roles suggest a need to study the frictions school leaders experience in their work. Identity research shows that frictions arise when aspired professional standards in situations are not achieved or are evaluated negatively by others and by school leaders themselves. In this study, 29 secondary school leaders (from team leader to school leaders that are responsible for one or more entire schools) are asked to describe feedback from others and self-assessments in significant practice situations. The feedback and self-ratings are compared and examined to see how these appraisals relate to perceived self-confidence in leadership (self-esteem, effectiveness and authenticity). Initial results show that school leaders' self-appraisals are more negative than appraisals from others of the same situation. Overall self-confidence in the leadership role is described with nuance by school leaders. The descriptions of the various aspects of school leaders' professional identity in this study, provide deeper insight into the relationship of professional standards in situations with feedback and perceived self-confidence. This gives</p>

	<p>context to perceived frictions in school leadership. It also shows how school leaders can more consciously direct their leadership from insight into aspects of their professional identity and by listening to their inner (critical) voice.</p> <p><i>Keywords: professional identity, school leaders, feedback, self-confidence</i></p>
16:00	Round Table 2D, Ruppert 032
Chair	<i>Monika Louws</i>
	<p>Presenter: Marlon van de Put</p> <p>Title: Steer or let go? Dilemmas of school leaders enhancing distributed leadership <i>Authors: Marlon van de Put, Dr. Anje Ros, & Prof. Dr. Marjan Vermeulen</i></p>
	<p>Distributed leadership refers to a collaborative approach to leadership where, in addition to formal school leaders, teachers also take leadership initiatives in school development based on their expertise. School leaders play a crucial role in fostering distributed leadership (for instance by creating sufficient opportunities for such initiatives and ensure psychological safety). However, as distributed leadership becomes more established, school leaders may encounter tension-filled situations (dilemmas) because also their own roles becomes subject to change. Knowledge about the types of dilemmas faced by school leaders who enhance distributed leadership and how they navigate them is scarce. This study addresses the question of which dilemmas school leaders experience while enhancing distributed leadership and how they cope with these dilemmas. Data were collected using logbooks and semi structured guided reflection interviews with five school leaders from Dutch primary schools at five moments. Preliminary results reveal that three types of dilemmas could be distinguished: 1) Ethical dilemmas: these relate to moral considerations; 2) Taking or relinquishing control: school leaders grapple with decisions about when to assert authority and when to delegate; 3) Mutual expectations between school leaders and teachers. School leaders exhibit varying approaches to cope with these dilemmas. Some coping strategies included modelling behaviour, engaging in dialogue with teachers, and providing structure</p> <p><i>Keywords: School leaders Distributed leadership Dilemmas</i></p>
16:30	Round Table 2D, Ruppert 032
Chair	<i>Monika Louws</i>
	<p>Presenter: Cheng Hua</p> <p>Title: Improvisation as an essential activity in music education: A systematic literature review <i>Authors: Cheng Hua, Roeland van der Rijst, Wilfried Admiraal</i></p>
	<p>Improvisation as one of the creative activities, plays a vital role in music education. As improvisation fostering creativity, musical expression, confidence, and collaborative skills among improvisors. This systematic literature review explores the commonly used improvisation activities, the significance of improvisation in music education, as well as its impact on students' musical development. We built up our systematic literature review on the PRISMA statement. This literature review examined research on improvisation in the music education field based on 52 peer-reviewed articles published between 2015 and 2024. This study aims to offer a</p>

	deeper understanding of the in-class improvisation activities and learning outcomes based on improvisation and improvisation instruction in music education settings. <i>Keywords: improvisation, music education, systematic literature review</i>
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Abstracts 18 April, 2E Poster presentations

15:30	Poster Presentation 2E, Ruppert 011
<i>Chair</i>	<i>Seyyed Kazem Banihashem</i>
	<p>Presenter: Rowan Haen <i>Discussant: Marloes Hendrickx</i></p> <p>Title: Conflict Detection across Various Probabilistic Reasoning Tasks <i>Authors: Haen, R., Janssen, E. M., Verkoeijen, P. P. L. J., De Neys, W. & Van Gog, T.</i></p> <p>Human reasoning can be biased because we often rely on heuristics. While these heuristics may yield valid conclusions in many instances, they can also lead to bias – systematic errors – when they cue answers that are at conflict with the laws of logic or probability theory. Traditionally, biased reasoning was attributed to failing to engage in thoughtful processing, and therefore failing to recognize this conflict. However, recent research shows that individuals, even when they make biased decisions, do display sensitivity to this conflict (i.e., ‘conflict detection’). This phenomenon also appears to be meaningful from an educational standpoint: Recent findings show that individuals who show signs of conflict detection are more receptive to accuracy feedback and benefit more from training. Thus, knowing whether or not people show conflict detection, might help to make training methods more adaptive (e.g., those who do not might need more or different training). However, to gain more insight into the educational relevance of the conflict detection effect, two issues need to be addressed. First, as prior research used rather basic tasks, it is important to establish whether conflict detection also occurs (and to the same extent) on more complex reasoning tasks. Second, it is unclear if people show conflict detection consistently across tasks that draw upon the same knowledge or skills (i.e., mindware). If so, this would open up the possibility of improving performance on multiple tasks with one training, reducing time and effort. We addressed these questions, by administering three different probabilistic reasoning tasks of various levels of complexity to a Profic sample of 100 Dutch students. Conflict detection was observed across all three tasks. However, a diminishing trend in the proportion of conflict detectors was observed as task complexity increased. The analyses on consistency are work-in-progress. Implication of these results will be further discussed.</p> <p><i>Keywords: Critical thinking, bias, reasoning, conflict detection</i></p>
15:30	Poster Presentation 2E, Ruppert 011
<i>Chair</i>	<i>Seyyed Kazem Banihashem</i>
	<p>Presenter: Nina van Graafeiland <i>Discussant: Marloes Hendrickx</i></p> <p>Title: Exploring the Complex Dynamics of Classroom Interaction with the Relational Event Model <i>Authors: Nina van Graafeiland, Mahdi Shafiee Kamalabad, Nienke Smit</i></p>

	<p>Classroom interactions are widely recognised as an important aspect of teaching and learning. Researching classroom interactions remains a challenge, as it can result in a large amount of data which are difficult to interpret directly. We propose to address this issue by viewing classroom interactions as a complex dynamic system, and analysing them through the relational event model. Applying complex dynamic systems theory to classroom interaction research would mean we look at the process as constantly changing and being impacted by multiple internal and external components. Social network analyses like the relational event model allow researchers to quantify how students and teachers interact in real-time and unravel the drivers behind this behaviour. In our paper, we elaborate on propositions and claims made in complex dynamic systems theory and demonstrate how these claims can be operationalized through the relational event model. We discuss the merits this approach could bring to the field of educational research, alongside its possible limitations.</p> <p><i>Keywords: classroom interaction, complex dynamic systems theory, social network analysis, relational event model</i></p>
15:30	<p>Poster Presentation 2E, Ruppert 011</p>
<i>Chair</i>	<p><i>Seyyed Kazem Banihashem</i></p>
	<p>Presenter: Melis Dülger <i>Discussant: Martine Baars</i></p> <p>Designing a Teacher Dashboard for Direct Instruction of Self-regulated Learning Strategies <i>Authors: Melis Dülger, Anouschka van Leeuwen, Jeroen Janssen, Liesbeth Kester</i></p>
	<p>Self-regulated learning (SRL) refers to learners' ability to effectively plan, monitor, and control their learning processes. However, many students encounter difficulties in regulating their learning. In The Netherlands, adaptive learning technologies (ALTs) are widespread in supporting primary school math education. These tools facilitate external regulation by providing feedback and adjusting problem difficulty levels. Nevertheless, students should still apply appropriate effort and control their learning, which places a demand on their SRL skills. Therefore, teachers' direct instruction of SRL strategies is important in primary school students' SRL development. To provide appropriate support, teachers should be able to identify classroom needs promptly. Yet, this might be challenging in large classrooms. Despite its importance, existing SRL dashboards have not targeted enhancing direct strategy instruction, and not all have been informed by theory. In addition, most SRL dashboards have targeted higher education settings, overlooking the significance of SRL for young learners. To address these gaps, we aimed to develop a theory-based classroom-level teacher dashboard using an iterative co-design approach. We conducted two rounds of interviews with teachers. In the first round, we explored relevant SRL indicators, teachers' strategy instruction practices, and their design preferences with ten primary school teachers using storyboards and reflective questions. We developed two dashboard prototypes, building upon insights from this round and theoretical foundations. In the subsequent round, using classroom scenarios and questions, we asked eleven teachers to assess our low-fidelity prototypes concerning the clarity and usability of the dashboard information and its design. This study outlines the design process of a classroom-level teacher dashboard to enhance teachers' direct strategy instruction in primary school settings, providing a reference point for future SRL dashboards.</p>

	<i>Keywords: self-regulated learning, teacher dashboards, direct strategy instruction, primary school, math</i>
15:30	Poster Presentation 2E, Ruppert 011
<i>Chair</i>	<i>Seyyed Kazem Banihashem</i>
	<p>Presenter: Luyao Huang <i>Discussant: Martine Baars</i></p> <p>Title: Pedagogical approaches and students' competences in interdisciplinary teaching: a systematic literature review <i>Authors: Luyao Huang, Roeland van der Rijst, Wilfried Admiraal</i></p>
	<p>This study is a systematic literature review that I am working on. This study systematically reviewed interdisciplinary teaching published between 2010 and 2023 and analyzed it using Biggs' 3P model (2003). In the process part of 3P, we use Van den Akker's Course Spider's Web(2003) as a coding scheme to learn interdisciplinary teaching in more detail. We try to answer 1) Which pedagogical approaches are used in interdisciplinary teaching? 2) What competencies does the pedagogical approaches promote?</p> <p><i>Keywords: interdisciplinary teaching, pedagogical approaches, students' competences</i></p>
15:30	Poster Presentation 2E, Ruppert 011
<i>Chair</i>	<i>Seyyed Kazem Banihashem</i>
	<p>Presenter: Fieke Ophuis-Cox <i>Discussant: Martine Baars</i></p> <p>Title: The Effect of Retrieval Practice on Fluently Retrieving Multiplication Facts in an Authentic Elementary School Setting <i>Authors: Fieke Ophuis-Cox, Leen Catrysse, Gino Camp</i></p>
	<p>Fluently retrieving simple multiplication facts leads to an improvement of overall math scores. In the current study, we investigated how to best reach this fluency in an authentic elementary school setting. We compared the short-term and long-term effects of the learning strategies retrieval practice (using flashcards) to a restudy control condition (chanting multiplication facts out loud) on multiplication fact fluency. Forty-eight second grade pupils received an instruction lesson and attended three spaced practice sessions per learning strategy. The learning strategies were counterbalanced across two different sets of multiplication tables in a within-subjects design. A pre-test, a five-minute delay post-test and a one-week delay post-test were administered. Compared to restudy, retrieval practice led to a stronger short-term and long-term increase in the fluency of retrieving multiplication facts. This study demonstrates the effectiveness of retrieval practice on gaining multiplication fact fluency in an authentic classroom setting using original course materials.</p> <p><i>Keywords: Retrieval practice; Multiplication facts; Elementary school; Classroom setting</i></p>

Abstracts 19 April, 3A Paper presentations

13:00	Paper presentation 3A, Ruppert 011
Chair	<i>Marjolein Dobber</i>
	<p>Presenter: Daan Buijs Discussant: Jiajia Li; Christa Krijgsman</p> <p>Title: A showcase of a phenomenological reflective interactive design methodology: The iteration in between personal transformation and system transition, in light of creating space for students' existential questions</p> <p><i>Authors: Daan Buijs</i></p>
	<p>How do we prepare students for a future yet unknown? And how do we create space for students' existential questions when they engage with their uncertain futures? These topical questions formed the source of inspiration for an educational design research project based on reflective interactive design (RIO), and integrated with a hermeneutic phenomenological base, and heuristic research. The project was carried out in the Bachelor Programme Interdisciplinary Social Sciences at the University of Amsterdam between 2019-2023. This programme has an intake of 250-300 students a year.</p> <p>This methodology is aimed at structural change, through the transformation of teachers and the transition of the system, and contains of three pillars that come back iteratively. The research took place in three consecutive cycles of one academic year, and contained 4 levels: theoretical development, students, teachers, and the institution. The study included a pilot group of 6 students, in which the space was created throughout their whole bachelor, and two batches of first years students, in which we design tutor meetings in the first year of the bachelor. Although the aim of structural change was not met, students have largely benefitted from the project, and a lot of them have taken the space as an opportunity for personal transformation. This was not so much the case with the teachers due to counterforces within the educational system and raising students numbers and thus also teachers. The project resulted in huge theory development, a set of design principles and manuals for the tutor meetings. The further development of the RIO methodology seems promising for future research.</p> <p><i>Keywords: Reflective interactive design, existential questions, structural change</i></p>
13:30	Paper presentation 3A, Ruppert 011
Chair	<i>Marjolein Dobber</i>
	<p>Presenter: Jiajia Li Discussant: Daan Buijs; Gonny Schellings</p> <p>Title: Shaping Maker Education through Design Thinking: A Lesson Study Perspective <i>Authors: Jiajia Li; Suilin Goeij; Wouter van Joolingen; Maartje Raijmakers</i></p>
	<p>The integration of Design Thinking (DT) and Maker Education (ME) has emerged as a pedagogical practice in ME contexts, which we refer to as DT-Making pedagogy (DTMP). While previous studies have highlighted the advantages of this approach for students, there is a lack of research on how teachers can effectively implement</p>

	<p>it to address this research gap, we joined forces with four elementary STEM teachers engaged in a Lesson Study (LS) cycle, with the aim of exploring this pedagogy. The purpose of our analysis was to examine a real classroom session using a hierarchical and nested coding scheme to assess teachers' utilisation of artefacts and questioning techniques. Our analysis identified three crucial ways in which LS contributes to establishing a professional development community for implementing DTMP in ME: (1) utilising DT process models to structure learning activities; (2) using DT toolkits to scaffold, visualise, and assess learning; and (3) utilising DT strategies to support questioning practices. Based on our findings, we developed practical recommendations aimed at facilitating the integration of DT-based teaching methods in classroom environments.</p> <p><i>Keywords: Maker Education; Lesson Study; questioning practice</i></p>
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Abstracts 19 April, 3B Paper presentations

13:00	Paper presentation 3B, Ruppert 005
Chair	<i>Shahab Jolani</i>
	<p>Presenter: Weiwei Liu <i>Discussant: Jennifer Schijf; Frans Prins</i></p> <p>Title: The Role of Human Agency in Dealing with Challenges in Transdisciplinary Learning for Sustainability in Higher Education: A Scoping Literature Review <i>Authors: Weiwei Liu, Valentina Tassone, Pascal Frank, Harm Biemans and Renate Wesselink</i></p>
	<p>Courses involving transdisciplinary learning approaches where students collaborate with peers with various disciplinary backgrounds and non-academic partners have become popular in higher education for sustainable development. However, there is not much research focusing on initiating agentic actions to deal with challenges in transdisciplinary learning processes for a more sustainable future. To address this gap, this study built the scoping literature review on the original concept of agency for transdisciplinary learning, which connects the challenges in transdisciplinary learning experience and two concepts of agency, agency for learning and agency for sustainability. Based on this concept, this study aims to present a comprehensive overview of the challenges and the role of human agency in transdisciplinary learning from the learner's perspective, including students, educational staff and societal partners. Executed on the bibliographic databases Scopus, ERIC (Education Resource Information Center), and Web of Science, the search resulted in 31 articles published between 2006 and 2023 for analysis. The main results of this review reveal that challenges in transdisciplinary learning experience reflected the characteristics of transdisciplinary learning. Prevailing challenges emerging from the inductive analysis included addressing tensions generated from conflicting perspectives and uneven power relationships, investing massive time and energy required for reflection, and dealing with uncertainty and unfamiliarity in transdisciplinary learning environments. The role of agency explored in current literature mostly appeared as an outcome of transdisciplinary learning, especially as increased self-efficacy. Some studies also mentioned positive forethought of taking actions, which, in turn, motivated people to overcome challenges in transdisciplinary learning. Collective agency was discussed in existing research as an emphasis on group relationship building and an awareness of connection to a broader group of people and nature. This reinforced self-efficacy, as good</p>

	<p>relationships with team members empowered learners to engage in transdisciplinary learning. These insights into learners' experiences in transdisciplinary learning from the perspectives of academic staff, students, and societal actors and the concept of agency in transdisciplinary learning have theoretical and practical implications for the optimization of transdisciplinary higher education for sustainability.</p> <p><i>Keywords: Agency, transdisciplinary learning, higher education, sustainability, literature review</i></p>
13:30	Paper presentation 3B, Ruppert 005
Chair	<i>Shahab Jolani</i>
	<p>Presenter: Jennifer Schijf <i>Discussant: Weiwei Liu; Joost Jansen in de Wal</i></p> <p>Title: Profiling High-Achieving Students: Characterising Bachelor's Students in an Interdisciplinary Excellence Programme</p> <p><i>Authors: J.E. Schijf MSc; Prof.dr. M.P.C. van der Werf; dr. E.P.W.A. Jansen</i></p>
	<p>The current working paper presents findings from a quantitative study within a larger PhD-project, focusing on learning experiences in and learning outcomes of an interdisciplinary excellence programme at the Bachelor's level. Firstly, we explored whether student profiles could be distinguished in the group of first-year participants on the basis of students' scores on personality traits (Big 5), need for cognition, and academic self-efficacy. Utilising latent profile analysis, three distinct student profiles emerged, characterised by significant differences in openness to new experiences, agreeableness, and emotional stability, alongside differences in need for cognition and academic self-efficacy. Secondly, we investigated demographic variation among these profiles. Analysis only revealed significant differences in participant age. We illustrated our findings with a qualitative description of the found profiles calling these "conventional minds," "intellectual explorers," and "general adventurers". Our insights contribute to an understanding of student participation within an interdisciplinary excellence programme and will be used in upcoming studies within the larger PhD-project.</p> <p><i>Keywords: interdisciplinary education; latent profile analyses; student profiles; honours education</i></p>

Abstracts 19 April, 3C Paper presentations

13:00	Paper presentation 3C, Ruppert 029
Chair	<i>Pantelis Papadopoulos</i>
	<p>Presenter: Xingshi Gao <i>Discussant: Mireille Smits-van der Nat; Gert Rijlaarsdam</i></p> <p>Title: Students' Online Peer Feedback Uptake in Argumentative Essay Writing <i>Authors: Xingshi Gao*, Omid Noroozi, Seyyed Kazem Banihashem, Judith Gulikers, Harm J.A. Biemans</i></p>
	<p>Peer feedback studies have primarily focused on its implementation rate, resulting in a limited understanding of the peer feedback uptake process. This study aims to investigate how students take up peer feedback in the context of argumentative</p>

	<p>essay writing within an online setting in higher education. We introduced a new coding scheme to evaluate students' uptake of online peer feedback, distinguishing between four types of uptake. Initial findings reveal that over half of the provided peer feedback was addressed, but ignorance was the most common uptake type. Students tended to accept feedback with solution features but were more likely to ignore feedback containing suggestions or metacognitive features. Our results could shed light on the relationship between the features of provided peer feedback and its uptake, contributing to the ongoing conversation on the effectiveness of online peer feedback in higher education.</p> <p><i>Keywords: feedback feature, feedback uptake, peer feedback, higher education</i></p>
13:30	Paper presentation 3C, Ruppert 029
Chair	<i>Pantelis Papadopoulos</i>
	<p>Presenter: Mireille Smits-van der Nat <i>Discussant: Xingshi Gao; Pantelis Papadopoulos</i></p> <p>Relation between Pretend Play Complexity and Social Competence in Early Childhood Education: a Mediation Model <i>Authors: Mireille Smits-van der Nat, Femke van der Wilt, Martijn Meeter, Chiel van der Veen</i></p>
	<p>Social competence is often considered of great importance for young children's development. According to Vygotsky's cultural-historical activity theory, pretend play can be an important context for the development of children's social competence. The aim of the current study was to investigate the relation between the complexity of pretend play and social competence in early childhood education. This study was the first to test a hypothesized model connecting children's pretend play complexity to their social competence (i.e., social cognitive skills and social acceptance), through their social-emotional behavior during pretend play. A sample of N = 248 children (age 3-6) participated in the study. Data collection consisted of individual testing to measure children's social cognitive skills and social acceptance as well as pretend play observations to indicate children's pretend play complexity and social-emotional behaviors during pretend play. Research Findings: Outcomes of mediation analyses revealed no evidence for the hypothesized model connecting pretend play complexity to social competence through their social-emotional behavior during pretend play. Interestingly, pretend play complexity was related to children's social-emotional behavior during pretend play. Future research is required to provide a better understanding about the relation between pretend play complexity and social competence.</p> <p><i>Keywords: Pretend Play Complexity; Social Competence; Social Cognitive Skills; Social Acceptance; Early Childhood Education</i></p>

Abstracts 19 April, 3D Paper presentations

13:00	Paper presentation 3D, Ruppert 031
Chair	<i>Chiel van der Veen</i>
	<p>Presenter: Ilse Maessen <i>Discussant: Simone Polderdijk; Monique Volman</i></p> <p>Title: Formative Evaluation in Socio-scientific Issues-based Science Lessons: views</p>

	of teachers and researchers <i>Authors: Ilse Maessen, Dury Bayram, Marloes Hendrickx, Jan van der Veen, Jan Vermunt</i>
	<p>Using formative evaluation (FE) in Socio-Scientific Issues (SSI)-based science lessons has a lot of potential as it can help teachers to assess students' skills developed in such lessons. Since limited research is available that combines these two areas, this study investigates science teachers' and educational researchers' views on FE in SSI lessons. Data was collected through semi-structured interviews with 23 science teachers, teacher educators and researchers in (science) education. During the interviews, the participants considered the relevance of 26 statements divided over 7 categories and shared their rationales. The interviews were analyzed qualitatively. Findings reveal various aspects in which FE should be tailored to SSI lessons. In addition, the need for teacher training and supporting educational materials was identified.</p> <p><i>Keywords: Socio-Scientific Issues, formative evaluation, skill development, science education, secondary education</i></p>
13:30	Paper presentation 3D, Ruppert 031
Chair	<i>Chiel van der Veen</i>
	<p>Presenter: Simone Polderdijk <i>Discussant: Ilse Maessen; Monique Volman</i></p> <p>Title: Warm and Demanding from an Interpersonal perspective: A Qualitative Synthesis of Culturally Responsive Teaching in Urban Classrooms <i>Authors: Simone Polderdijk, Lotte F. Henrichs, Jan van Tartwijk</i></p>
	<p>One of the biggest challenges in Dutch education is the alarming teacher shortage. In schools where more students are at risk of educational disadvantage the teacher shortage is even worse. This problem is strongly visible in urban contexts where classrooms are characterized by a diversity of students' home languages and cultural practices. Dealing with diversity in the classroom is perceived as challenging by pre-service and in-service teachers because it can pose specific dilemmas. Teacher education and teacher support programs need to address the various problems that teachers may be confronted with when teaching in urban classrooms by preparing them for culturally responsive dispositions and classroom management strategies. One well researched culturally responsive teaching practice is warm demander pedagogy. The two central dispositions of a warm demander are care and authority and serve the purpose of supporting a culture of achievement for students of color. In this qualitative literature study, we aim to decontextualize the underlying successful mechanisms of the warm demander pedagogy by mapping their interpersonal behavior with the Interpersonal Circle – Teacher. We found nine empirical case studies of teachers that were nominated as warm demanders. All articles were coded with a three-point-scale (low, middle, high) on the two dimensions of the IPC-T: Agency and Communion. Agency refers to influence, power, or control. Communion connotes ideas of affiliation, proximity, or friendliness. The results are discussed using two timescales: daily moment-to-moment interactions in the classroom and established teacher-student relationships. Findings illuminated that both timescales are characterized by high levels of agency and communion, but warm demanders' behavior was also frequently coded as low on communion in daily interactions. This contrasts with the</p>

	<p>results of teacher-student relationships of warm demanders which are most frequently coded on higher levels of communion. We discuss the implications of these findings.</p> <p><i>Keywords: warm demander, culturally responsive teaching, urban classrooms, interpersonal perspective</i></p>
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Abstracts 19 April, 3E Round Table discussions

13:00	Round Table 3E, Ruppert 032
<i>Chair</i>	<i>Isabel Raemdonck</i>
	<p>Presenter: Judith Rotink</p> <p>Title: Exploring the affordances and limitations of a teacher professional development program for citizenship in chemistry education.</p> <p><i>Authors: Judith Rotink, Talitha Visser en Susan McKenney</i></p>
	<p>Schools are free to choose how they attend citizenship. However, to give citizenship a sustainable place in education, integration of citizenship in the different school subjects is an advantage. This way citizenship education is embedded in the curriculum. In this study, a teacher professional development program is developed with the 4C/ID method and tested by the Kirkpatrick model to evaluate the reactions of chemistry teachers, their learning outcomes, and their behavior. Chemistry teachers, being new to this type of education, can benefit from support in developing it. This will provide insight into the affordance and limitations of a teacher professional development program for citizenship in chemistry education.</p> <p><i>Keywords: Citizenship education</i> <i>SSI</i> <i>Chemistry education</i> <i>Teacher development.</i></p>
13:30	Round Table 3E, Ruppert 032
<i>Chair</i>	<i>Isabel Raemdonck</i>
	<p>Presenter: Tom Schoemaker</p> <p>Title: The soul of the (student) teacher</p> <p><i>Authors: Tom Schoemaker, Helma Oolbekkink, Cok Bakker, André Mulder</i></p>
	<p>Teachers want to teach with their heart and soul. Students want their teachers to teach with their heart and soul. (Palmer, 2003) Obviously this is a metaphor. A metaphor that expresses that teaching should be, not only about knowledge and skills, but also about the teachers deepest self. About a teacher being committed to teaching with all that she has in her. But how do student teachers discover what their deepest self is? And how do teacher educators teach or coach student teachers to act upon their deepest self?</p> <p>In this round table discussion I would like to present a framework, building on Kelchtermans' Personal Interpretive Framework and Korthagen's onion for core reflection. This framework is meant to be used to notice, to analyze and (eventually) to teach (student)teachers to work from their deepest self, or call it soul, core, essence.</p>

	I would very much like to receive feedback on this framework. <i>Keywords: personal and professional identity of the (student)teacher, soul</i>
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Abstracts 19 April, 4A Paper presentations

14:30 <i>Chair</i>	Paper presentation 4A, Ruppert 011 <i>Olle ten Cate</i>
	<p>Presenter: Anna Isahakyan <i>Discussant: Amber Kornet; Astrid Poorthuis</i></p> <p>Title: Examining the Dynamics of Student-Student and Student-Expert Interactions in Radiology Learning <i>Authors: Anna Isahakyan, Dr. Maryam Asoodar, Dr. Ellen Kok, Dr. Bjorn de Koning, Prof. Fred Paas</i></p>
	<p>Background Radiology readout, a widely used method in radiology education, employs a Socratic approach characterized by interactive dialogue to facilitate learning. It enables two types of interactions: between an expert radiologist and students, and among students themselves. Student-expert interaction provides a mentored learning environment where experienced radiologists offer mentorship and guidance. Student-student interaction provides a peer learning environment that encourages open communication and candid discussion of problems. Existing research primarily focuses on the effectiveness of either peer teaching or mentored teaching. Less is known about how medical students perceive the function of student-student and student-expert interactions in learning X-ray image interpretation and how this function plays out through verbal communication used by medical students and experts during readout sessions. Consequently, a gap in the literature is identified, which deprives radiology educators of critical knowledge necessary for optimizing the structure and delivery of readout sessions for medical students, with the goal of improving their diagnostic proficiency.</p> <p>Methods To address this gap, we conducted a two-stage qualitative observational study. The initial stage focused on observing verbal communicative dynamics during student-student interactions. In the second stage, we observed verbal communicative dynamics during student-expert interactions. Additionally, individual interviews were conducted to explore how medical students perceive the function of student-student or student-expert interactions during readout sessions in learning X-ray image interpretation.</p> <p>Results During student-student interaction, verbal communication primarily comprised questions, disclosure, and confirmation. Despite experiencing uncertainty and engaging in frequent guesswork during peer interactions, students viewed these exchanges as a valuable stepping-stone for verbalizing their thoughts. Students found it easy to communicate freely with their peers and perceived the interactions as a means of learning from each other and complementing their knowledge. In contrast, student-expert interactions involved interpretation, reflection, question, disclosure, confirmation, and advisement, and students recognized the significant role of student-expert interactions in providing certainty. Experts were able to confirm correct answers, clarify misconceptions, offer essential feedback, and stimulate deeper discussions. When students made errors, experts</p>

	<p>provided corrections and explained the underlying differences in understanding.</p> <p>Conclusions</p> <p>Overall, this study significantly enhances our understanding of students' perceptions regarding the different functions that play out in conversations during student-student and student-expert readout sessions during the interpretation of X-ray images. It demonstrates that communication dynamics differ between student-student and expert-student interactions and highlights the distinct ways students perceive these different forms of interaction. The study generates valuable insights that can inform the design and implementation of readout sessions for medical students and improve their diagnostic skills.</p> <p><i>Keywords: Radiology readout, Verbal communications</i></p>
15:00	Paper presentation 4A, Ruppert 011
Chair	<i>Olle ten Cate</i>
	<p>Presenter: Amber Kornet</p> <p><i>Discussant: Anna Isahakyan; Astrid Poorthuis</i></p> <p>Title: The dynamics of team learning and reflexivity over development-phases: a temporal perspective</p> <p><i>Authors: Amber Kornet, Sebastian M. Dennerlein, Maaïke D. Endedijk, Tijmen M. Schipper</i></p>
	<p>Team learning is a dynamic process that can be seen through a temporal lens. Yet, research remains sparse on temporal dynamics e.g. onset, duration, temporal relations and changes over time in team learning. To detect temporal dynamics we analysed activities of team learning and reflexivity within and across team development phases. Findings of the analysis of eight cross-functional innovation teams show patterns of learning and reflexivity in the phases of forming and functioning, diminishing in finishing. Teams performing various activities during forming adjust their goal less. Finishing is characterized by learning but starts and ends with reflexivity. We add a temporal perspective on team learning to both theory and practice.</p> <p><i>Keywords: Cross-functional innovation teams, team learning, team reflexivity, team development, temporal perspective</i></p>

Abstracts 19 April, 4B Paper presentations

14:30	Paper presentation 4B, Ruppert 005
Chair	<i>Renate de Groot</i>
	<p>Presenter: Femke Koekkoek</p> <p><i>Discussant: Brittney Root; Sophie Oudman</i></p> <p>Title: A View on the Horizon: Investigating Perspectives on the Wicked Problem of Inequality of Educational Opportunity in the Netherlands</p> <p><i>Authors: Femke Koekkoek, Louise Elffers, Eddie Denessen, Monique Volman, Floris Burgers</i></p>
	<p>Inequality of educational opportunities is a 'wicked' problem, demanding concerted efforts from various local stakeholders. Collective efficacy hinges on individual actors feeling a sense of ownership and agency in addressing this issue. However, disparities in ownership and agency might arise due to differing perspectives on the</p>

	<p>nature, causes, and approaches of the problem of inequality of opportunity. This mixed-methods exploratory study delves into the perceptions of diverse actors within a local context concerning the problem of educational inequality. The goal is to understand the various views on the nature, scope, and causes of this issue, as well as perspectives on the responsibility for its resolution. The central question of this study is: To what extent do views on the problem of inequality of opportunity in education vary between actors and actor groups in educational policy and practice? Survey (n = 515) and interview data (n = 41) were collected from the entire local school networks in two medium-sized Dutch cities. Participants included municipal educational executives, local policymakers, school boards, headteachers, teachers, and parents. Preliminary results show that the majority of the actors acknowledge inequality of opportunities in education as a problem – and as a problem that should and can be solved. However, there is a lot of variation in what people find important when it comes to inequality of opportunities. Respondents understood and defined the problem and its causes in different ways. These differences occurred at the individual level, rather than at the actor group level. Despite these differences, there is a consensus among local stakeholders that addressing this problem requires a shared responsibility, involving both the national government and all relevant actors. During the presentation we will discuss whether ‘inequality of opportunity’ is a useful concept for research, policy and practice: should we redefine or abandon it?</p> <p><i>Keywords: Inequality of opportunities; Perspectives; Wicked problem; Local context; Mixed methods</i></p>
15:00	<p>Paper presentation 4B, Ruppert 005</p>
<i>Chair</i>	<p><i>Renate de Groot</i></p>
	<p>Presenter: Brittney Root <i>Discussant: Femke Koekkoek; Sophie Oudman</i></p> <p>The Impact of an Integrated Care Arrangement in Special Schools: A Cost and Benefit Analysis. <i>Authors: Brittney V. Root, Mariëtte Huizinga, Anika Bexkens, and Martijn Meeter</i></p>
	<p>Background A substantial body of evidence suggests that integration of care across disciplines is crucial for pupils with special educational needs (SEN). Despite this awareness, professionals still often work independently. To reduce systematic barriers to collaboration, initiatives integrating care in education can be deployed. Such initiatives can be costly up-front, but could save money in the long run, either by reducing administrative costs or by improving outcomes (e.g., Unützer et al., 2008). To explore the use of cost-benefit analyses in evaluating the impact of these initiatives in special education, we will zoom in on one initiative in the Netherlands.</p> <p>Aims Although 72% of children within Dutch special schools receive additional support (Bakker et al., 2019), they are still required to submit formal requests for care. To provide immediate tailored support for these students, the Amsterdam municipality facilitated an initiative called Specialist Youth Care in Special Education (SYSE), starting in 2018-2019, in which no request is necessary, and care professionals are already embedded in the classroom (van Binsbergen et al., 2020). We answer the following questions: (1) Does the integrated care arrangement as it exists now with the SYSE initiative lead to better outcomes for pupils compared to the situation</p>

	<p>without the arrangement? (2) Do the social and financial benefits of SYSE outweigh the costs?</p> <p>Methods and Procedures</p> <p>We performed a cost-benefit analysis using qualitative and financial data. We conducted individual semi-structured interviews with professionals within 4 intensive special classrooms that were funded by the SYSE initiative. To address whether the initiative leads to better outcomes, we compare codes in the care-integrated versus the counterfactual scenario. To address whether the benefits of this initiative outweigh the costs, we analyze codes describing the social costs and benefits of the initiative and extract the financial costs from public and school records.</p> <p><i>Keywords: Special Educational Needs, Integrated Care, Education-Care Arrangement, Cost-Benefit Analysis, Special Schools</i></p>
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Abstracts 19 April, 4C Paper presentations

14:30	Paper presentation 4C, Ruppert 029
Chair	<i>Anne de Bruijn</i>
	<p>Presenter: Eveline Gerretsen <i>Discussant: Sietse Brands; Arnoud Evers</i></p> <p>Title: Basic bronchoscopy training for pulmonology residents in a nationwide simulation-based training program: a pretest-posttest study <i>Authors: Eveline Gerretsen, Marleen Groenier, Erik van der Heijden, Walther van Mook, Jouke Annema, Frank Smeenk</i></p>
	<p>Background: Simulation-based flexible bronchoscopy training ideally precedes workplace-based flexible bronchoscopy learning. However, there is a lack of evidence on the effectiveness of bronchoscopy simulation training (BST) courses when implemented on a broad (national) scale.</p> <p>Research Question: What is the impact of implementing a mandatory, nationwide one-day BST course on pulmonology residents' bronchoscopy performance in a simulation setting?</p> <p>Study Design and Methods: We conducted a nationwide pretest-posttest BST study. As of 2020, Dutch novice pulmonology residents were obliged to follow a BST course that was given in 7 simulation centres across the Netherlands. After passing a theoretical test, residents practiced their bronchoscopy skills in pairs step-by-step in a structured way on a virtual reality simulator (Surgical Science) under pulmonologist supervision in a one-day course. Residents practiced scope handling efficiency ("Task 1") and bronchoscopy skills combined with lung anatomy knowledge ("Task 2). Outcome measures for Task 1 consisted of simulator metrics related to navigational skills (percentage of time at mid-lumen and time with scope-wall contact, total procedure time, number of wall contacts and number of wall contacts per minute of procedure time) and for Task 2 total procedure time, scores of a validated assessment tool (with overall-composite score on a 5-point scale: 1 representing the worst and 5 the best performance) and blinded assessments of dexterity.</p> <p>Results: The study included 87 residents. For Task 1, all simulator metrics improved</p>

	<p>significantly ($P < 0.001$), except for the number of wall contacts per minute of bronchoscopy (4.2[2.9] wall contacts pre versus, 3.4[2.7] post, $P = 0.07$). For Task 2, there was a 54% reduction in procedure time (10.3 ± 2.7 minutes pre versus 4.7 ± 0.8 minutes post, $P < 0.001$), an improvement in overall-composite scores (2.0[1.0] pre versus 4.0[1.0] post, $P < 0.001$) and all dexterity parameters ($P < 0.001$).</p> <p>Interpretation: A nationwide implementation of a BST course led to rapid improvement of residents' basic bronchoscopy skills, significantly enhancing bronchoscopy quality, while halving procedure time.</p> <p><i>Keywords: bronchoscopy; simulation; implementation</i></p>
15:00	Paper presentation 4C, Ruppert 029
Chair	<i>Anne de Bruijn</i>
	<p>Presenter: Sietse Brands <i>Discussant: Eveline Gerretsen; Slavi Stoyanov</i></p> <p>Title: Effects of prompts on video-based after-action reviews and 5 ways to hide your mistakes <i>Authors: S. Brands; B. Kolloffel; M. D. Endedijk; E. R. Savelsbergh</i></p>
	<p>Effective reflection is crucial for students in vocational education to enhance their learning and professional development. However, many students encounter difficulties in engaging in reflective practices. In this study, we investigate the efficacy of utilizing video review, prompting, and student-tutor interaction to support reflection among vocational education students. 32 students were divided into two groups, with each group recording their practice sessions, reviewing their performance through video analysis, and creating reflective annotations. Following this, students engaged in a structured conversation with their tutors to discuss their reflections. The quality of students' reflective annotations, the process of review and annotation creation, and the dynamics of student-tutor conversations were analysed. Our findings reveal that students, when prompted, were able to generate higher quality reflective annotations. However, there was evidence of a tendency among students to polish, retake, edit, skip or suppress (PRESS) their mistakes prior to sharing their recordings and annotations with their tutor. Moreover, the student-tutor conversations facilitated new insights into the students' practice, suggesting the value of interpersonal dialogue in fostering deeper reflection. This study highlights the effectiveness of utilizing video review, prompting, and student-tutor interaction as means to enhance reflection among vocational education students. The insights gained from this research can inform pedagogical approaches aimed at improving reflective practices in vocational education settings, ultimately contributing to the professional development of students in various vocational fields.</p> <p><i>Keywords: Video-based Reflection; Performance evaluation; Video-annotation; Feedback dialogue, VET</i></p>

Abstracts 19 April, 4D Paper presentations

14:30	Paper presentation 4D, Ruppert 031
Chair	<i>Jeroen Janssen</i>
	<p>Presenter: Ha Nguyen <i>Discussant: Wenjun Cai; Kevin Ackermans</i></p> <p>Title: Adapting the Technological Pedagogical and Content Knowledge (TPACK) survey for higher education <i>Authors: Ha Nguyen, Jolien Mouw, Angeliki Mali, Jan-Willem Strijbos, Hanke Korpershoek</i></p>
	<p>Measuring and monitoring teachers' competencies in teaching with technology is essential for higher education institutions to provide appropriate support and professional development activities, on the way to achieve effective online/blended/hybrid education. The Technological Pedagogical and Content Knowledge (TPACK) model distinguishes seven key factors: technological knowledge (TK), technological pedagogical knowledge (TPK), pedagogical knowledge (PK), pedagogical content knowledge (PCK), content knowledge (CK), technological content knowledge (TCK), and technological pedagogical and content knowledge (TPCK). Although frequently used to measure teachers' competencies in teaching with technology, existing TPACK surveys have mostly been used for pre-service or K-12 teachers. Few of the existing TPACK surveys have specifically been developed for university teachers. Hence, this study set out to construct a TPACK survey for higher education in the context of online/blended/hybrid education. Through reviewing the existing surveys and systematically scrutinizing their subscales and items, as well as adaptation and contextualization, we developed a TPACK survey adapted to higher education. Our adapted TPACK survey consists of 31 items distributed across 7 subscales. Each item is rated on a 5-point Likert-scale ranging from 1 (strongly disagree) to 5 (strongly agree). Results from our study indicate that (a) the subscales are sufficiently internally consistent and (b) the items fit the TPACK constructs as operationalized in the seven-factor model.</p> <p><i>Keywords: Higher education; Teacher professional development; Quantitative methods; Educational Technologies</i></p>
15:00	Paper presentation 4D, Ruppert 031
Chair	<i>Jeroen Janssen</i>
	<p>Presenter: Wenjun Cai <i>Discussant: Ha Nguyen; Michelle Helms-Lorenz</i></p> <p>Title: Exploring Student Learning Experiences in Innovative Mathematics Courses within Engineering Education: A Mapping Review of Literature <i>Authors: Wenjun Cai</i></p>
	<p>Today's world is plagued with over-consumption due to, amongst others, a rapidly growing population, climate change, and globalization. To address these issues innovative solutions are needed, which in turn requires innovative engineering education (Ardiansyah & Asikin, 2020; Gaskins et al., 2015; Lönngren et al., 2017; Membrillo-Hernández et al., 2018). Innovative teaching and learning methods have unique approaches to delivering, providing, absorbing, and helping students to process information (Felder & Brent, 2005). López-Díaz and Peña (2022) found that</p>

	<p>the execution of practical problems in engineering education improves students' understanding of mathematical concepts. Therefore, despite the perception of mathematics as an abstract field for some, the implementation of innovative educational methodologies like Problem-Based Learning (PBL) appears to be well-suited for the advancement of higher-level mathematical understanding. Through these pedagogical strategies, students actively engage in the 'creation' of mathematical knowledge (Dahl, 2018), a process that is applicable not only within the broader societal context but also within the specialized communities of professionals and researchers (Maass et al., 2019). Pepin et al., (2021) provide a comprehensive overview of initiatives for innovative mathematics in engineering education.</p> <p>Higher education institutions and their stakeholders (Ertl et al., 2008) are paying greater attention to students' experiences in higher education than before. According to Kolb and Kolb (2022), there is often a chasm between theoretical knowledge and experiential activities in higher education that reduces the effectiveness of both. Therefore, the study of students' learning experiences is also important in engineering education, especially in innovative student-centered engineering education.</p> <p><i>Keywords: engineering education ,mathematics education, higher education, innovative education, literature review</i></p>
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Abstracts 19 April, 4E Round Table discussions

14:30	Round Table 4E, Ruppert 032
Chair	<i>Tim Huijgen</i>
	<p>Presenter: Jane Pieplenbosch</p> <p>Title: Transferring Trained Self-Regulation Skills: Student's Accuracy at Selecting Tasks for Themselves or a Fictitious Peer</p> <p><i>Authors: Jane Pieplenbosch, Vincent Hoogerheide, Gesa van den Broek, Florence Lucas, Barbara Flunger, & Tamara van Gog</i></p>
	<p>For effective self-regulated learning with problem-solving tasks, it is crucial that students select learning tasks that are suitable given their current level of performance. However, most students are unable to do so. Prior research has shown that task-selection skills can be trained using video modelling examples. However, it is unclear whether students can transfer the trained task-selection skills to new types of problems. This is important to establish, because it would be impossible to train self-assessment and task-selection skills for all types of problems students encounter. One prior study found that the training also positively affected transfer performance when selecting tasks based on vignettes describing a fictitious peer's performance. Another study, however, found no evidence of transfer when students, after training, had to engage in self-regulated learning with new tasks themselves. This discrepancy could be due to differences in cognitive load, which is higher when solving problems oneself. This could leave students with insufficient cognitive resources to transfer the trained task-selection skills. Another explanation might lie in the social-motivational processes that play a role when selecting tasks for oneself compared to selecting tasks for someone else. Therefore, this study aims to uncover whether students are more accurate at transferring trained task-selection skills when selecting new types of tasks for (fictitious) peers than for</p>

	<p>themselves, under higher and lower cognitive load conditions. We will also investigate the association between task-selection accuracy and students' invested mental effort, self-efficacy, and challenge/threat experiences. These findings will provide more insight into obstacles and conditions for transfer of trained self-regulated learning skills and will help to inform the design of interventions to improve transfer.</p> <p><i>Keywords: Regulation accuracy; Peers; Problem-Solving; Transfer</i></p>
15:00	Round Table 4E, Ruppert 032
Chair	<i>Tim Huijgen</i>
	<p>Presenter: Eleanor Rowan</p> <p>Title: Out of the box: inclusive methodological practices for recruiting diverse samples</p> <p><i>Authors: Eleanor Rowan, Sanne Akkerman, Bjorn Wansink, Monique Volman, Monique Verhoeven</i></p>
	<p>Diversity is a rising theme in educational research, indicative of an increasing focus in educational research on social justice and equity. The importance of inclusive research is integral, with researchers considering their duty of care to participants at different steps in the research process, from sampling to methods to the dissemination of results. In my PhD project on adolescents' interest pursuits, we wanted to recruit participants who might have experiences of structural marginalisation, as we wanted to examine the effect of cultural norms and capital on adolescents' interest development. However, we did not want to reduce our participants to a single social characteristic, or assume that they would have relevant experiences of marginalisation they wanted to share, avoiding a deficit lens. This tension of how to achieve representation in research samples is a challenge in the field more broadly.</p> <p>In this roundtable, I share our inclusive sampling approach in a research project examining adolescents' interest development inside and outside of school. I present the context-specific operationalisation of diversity we developed, an 'identity matrix' with intersectional scales related to participants' interests and social characteristics. The roundtable will focus on discussing specific cases that we found challenging or complex, and using these to reflect on our methods.</p> <p><i>Keywords: qualitative methods, diversity, sampling, inclusion</i></p>