



Utrecht  
University

Centre for Academic  
Teaching and Learning

# Fifth Utrecht Scholarship of Teaching & Learning Conference

9 March 2023



Onderwijs **Festival**



This booklet contains all the abstracts  
as presented during the fifth Utrecht  
Scholarship of Teaching and Learning  
conference on Thursday the 9th of March  
2023, during Utrecht  
University's OnderwijsFestival.  
Photography: Lize Kraan

## Welcome!

*Welcome to the fifth Utrecht Scholarship of Teaching and Learning conference – a strand in the programme of the OnderwijsFestival.*

*The OnderwijsFestival is the stage for students, teachers and all of our other university staff. They come together on this day to share information and exchange ideas about the quality and developments in education, but above all to meet each other, relax and get inspired. The theme of the OnderwijsFestival 2023 is Gamechangers: jij, ik, zij zijn het onderwijs.*

*During the OnderwijsFestival, special attention will be paid to teachers and staff who are doing research on their own teaching (Scholarship of Teaching and Learning, SoTL) and want to share their (research-informed) plans, progress and results. Teachers from all disciplines are invited to present their projects aimed at promoting student learning. This entails educational projects that are research-informed (i.e. by building upon educational literature) or focused on researching education in a systematic and research-based manner.*

*Today, we aim to bring together the research on teaching and learning network at Utrecht University. We give a special welcome to colleagues from other higher education institutions in the Netherlands and abroad that join us today.*

*The SoTL abstracts were selected by a committee that developed the SoTL strand in the programme as well. The committee consisted of Vincent Crone (chair), Emanuel van Dongen, Anneke van Houwelingen, Femke Kirschner, Marije Lesterhuis, Maarten van der Smagt, Bald de Vries, Veronique Schutjens and Rik Vangangelt.*

*Please do not hesitate to contact us if you have any comments about the conference or suggestions for future meetings on [cat@uu.nl](mailto:cat@uu.nl) or see [www.uu.nl/cat](http://www.uu.nl/cat).*



DBER is often relevant for the whole disciplinary field, and sometimes even outside the field, and in contrast to SoTL the emphasis is on the generation of educational knowledge and theories in education for discipline specific academic teaching and learning.



A typical example of the title of a DBER-publication is:  
The Script Concordance test: a new tool to assess the reflective clinician.

### **Supporting Educational Scholarship**

The Centre for Academic Teaching tries to facilitate and stimulate educational scholarship with:

1. network and community events
2. courses and programmes
3. support and resources
4. projects and visibility

#### *1. Network and community events*

Besides this SoTL conference, we bring together our active SoTL community in Special Interest Group meetings throughout the year. Utrecht University's research focus area Higher Education Research brings together discipline-based and educational sciences researchers. November 2023, Utrecht University will host the annual conference of the International Society for the SoTL (ISSOTL23).

#### *2. Courses and programmes*

To help teachers develop educational scholarship competencies, we offer both basic SoTL courses and support, as well as advanced longitudinal programmes, e.g., the Educational Research Training Programme for university teachers. Several times a year, on-site and online workshops or masterclasses are offered in order to introduce teachers to SoTL or to become more skilled in certain aspects of SoTL, e.g., during the biannual Teaching and Learning Inspiration Days.

#### *3. Support and resources*

The practical step-by-step Utrecht Roadmap for SoTL, helps teachers to systematically research their own teaching practices when they want to optimise them and professionalise by gaining knowledge about their students' learning. Teachers can apply for financial support in the SoTL grant scheme, which funds methodological advice or student assistants collecting or analysing data. The Higher Education Research grants fund (pilot) research of (discipline based) educational scientists.

#### *4. Projects and visibility*

The CAT website and newsletter offers scholarship projects a platform. Also, multiple experts that focus on educational scholarship are willing to help you out, e.g., multiple educational consultants, a senior fellow and PhD student.

### **References**

1. Hutchings, P., & Shulman, L. E. (1999). The scholarship of teaching: New elaborations, new developments. *Change*, 31(5), 10–15.
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3. National Research Council (2012) *Discipline-based Education Research. Understanding and improving learning in undergraduate science and engineering.* 1th Ed.; National Academies Press: Washington, USA



Please find the full programme of the OnderwijsFestival at [www.onderwijsfestivaluu.nl](http://www.onderwijsfestivaluu.nl).

## Programme

In the programme, some sessions focus on the Scholarship of Teaching and Learning:

### Poster pitches in the Green Room (10h45-12h15)

*Share your perspective on which educational designs are most effective*

Do you have ideas about which teaching methods are most effective? When do you notice that you actually remember the material well? Questions like these can be researched by your teachers. During this poster session, teachers from different disciplines will present their scientific research on their own teaching in posters on a variety of topics. Here, you will have the chance to interact with them and share your perspective on their research. Who knows, you might have your own ideas on educational research and inspire your teacher to start a project. The following posters will be presented:

- I. **Creating Community Engagement in Higher Education. Appreciative Inquiry into Developing an Action Learning Course at Utrecht University**  
*Anna Ben Shalom, together with Danielle Vlaanderen, Stephanie Kruiper, Karin van Look*
- II. **Helping students choose a course within interdisciplinary education**  
*Carlijn van den Boomen, together with Karin van Look, Jonne Vulperhorst, Esther Slot*
- III. **Pleading in Virtual Reality: improving student experience and student learning**  
*Emanuel van Dongen, together with M.A. Hegeman, R. Drbohlav Ollerton*
- IV. **How to support students' learning from research papers?**  
*Angela Ivask, together with Siiri Velling, Edith Viirlaid, Kaire Uiboleht*
- V. **A challenge-based interdisciplinary undergraduate concept fostering translational medicine**  
*Michael Schakelaar, together with F.A. Valentijn, S. Crnko, M.A. Hegeman, W.D. Schot, W.J.A.G. Dictus, T. ten Broeke, N. Bovenschen*
- VI. **Understanding the role of conducting design-based research in teacher education**  
*Micha Ummels, together with Michiel Dam*
- VII. **Social connectedness in higher education: evidence from first year learning communities**  
*Jet van der Zijden, together with Theo Wubbels*

### Workshop: Shape your SoTL project with the Utrecht Roadmap (10h45 – 12h15)

*By Femke Kirschner and Esther van Dijk*

In this workshop, educational consultants will present the Utrecht Roadmap for Scholarship of Teaching and Learning (UR-SoTL); an instrument that will guide you through the first steps of research-informed teaching by providing information, tips, tricks, and pitfalls. You will make a start with designing your own SoTL project. Additionally, two teachers will pitch their SoTL projects to share their insights and to inspire you.

## Programme

### Teacher Talks: four examples of evidence informed onderwijs (13h00 – 14h30)

*Get inspired about researching your own teaching*

How can you take a research-based look at your own teaching? And why should you do so in the first place? In this session, four teachers give a presentation on researching their own teaching (Scholarship of Teaching and Learning, SoTL). Topics of their projects include: videos in teaching, student self-regulation, inter- and transdisciplinarity, blended learning and challenge-based learning. They will be able to tell you why they started this, share their results and there will be room for interaction. The session, led by Emanuel van Dongen and Femke Kirschner, will start with a brief explanation of what SoTL is and how you can use it to optimise your teaching. The following presentations will be delivered:

- VIII. **The use of patient-videos in pharmacology teaching**  
*Roos de Jonge, together with Claudia van Hout, Emma Wessel, Rahul Pandit*
- IX. **Using an adaptive learning system for optimal dissection class preparation**  
*Bo van Leeuwen, together with Steven Raaijmakers, Claudia Wolschrijn, Beerend Hierck, Daniela Salvatori*
- X. **Connective thinking for integration of the General Education curriculum**  
*Rianne van Lambalgen*
- XI. **Towards European Student Research HUB Networks to Foster Transdisciplinary Challenge-Based Education**  
*Michael Schakelaar, together with Q. Bassat, C.M. Comiskey, K. Felvinczi, J.C.M. Haarhuis, S. Crnko, T. ten Broeke, N. Bovenschen*

### Workshop on SoTL: ethical review and students as partners (13h00 – 14h30)

*What is your role as a student in educational research? By Anneke van Houwelingen and Aleid de Jong*

This workshop will discuss, among other things, your role as a student in educational research projects. How can you best be involved in such projects? What could you contribute and what support do you need to do so? In addition, we look at the ethical dilemmas of educational research. Should innovations be taught to entire groups of students? Is it a problem if the teacher is the researcher as well? Are you interested in educational research and do you have your own ideas about this? Come along and share your perspective!

## Programme

### SoTL: Pitch session on educational research (14h45 – 16h15)

*Share your thoughts on running educational research projects*

Eight teachers researching their own teaching (Scholarship of Teaching and Learning, SoTL) will share their (research-informed) plans and progress in this session. Topics such as inclusivity, workplace learning, skills and student motivation will be discussed. In a round table setting, teachers will pitch their project and ask you and the rest of the audience to contribute your thoughts on their educational research project.

The following pitches will be delivered and discussed:

- XII. **Evaluating One Book One Campus: shared reading for inclusion and community building**  
*Agnes Andeweg*
- XIII. **Transitioning from formal to informal learning: an interprofessional training program to prepare (bio)medical students for workplace learning**  
*Mila van Dorst, together with Marije Lesterhuis, Renske de Kleijn, Marije Hennus*
- XIV. **Building career competencies and boosting wellbeing in young adults – a comparative intervention study in higher education**  
*Anne van Ewijk, together with Anouk de Regt*
- XV. **Self-regulation of first-year students and self-directed learning**  
*Rachel van Egeraat-Verbeek, together with Tim Frijters*
- XVI. **Social-Artistic Collaboration in Higher Education**  
*Floor Mijland*
- XVII. **Mentoring studenten: studievaardigheden**  
*Bald de Vries*

### I am not alone! How others have already solved your problem (14h45 – 16h15)

*Avoid the wheel form being reinvented! By Vincent Crone and Rik Vangangelt*

This workshop focuses on problems lecturers may encounter in educational research. We will show how easy it is for lecturers to let their teaching be inspired by what others have already published about those problems, ideas or questions. Lecturers are often not alone, but supported by many fellow lecturers and educational scientists. During this session, they get the chance to start searching for relevant literature and get pointers to help them add an evidence base to your educational innovation. Would you like to know more about how this works and share your perspective? Then please join us!

## Conference posters, pitches and presentations

On the following pages you can find the abstracts of posters, pitches and presentations as presented during the conference.

### I. Creating Community Engagement in Higher Education. Appreciative Inquiry into Developing an Action Learning Course at Utrecht University

*Anna Ben Shalom, together with Danielle Vlaanderen, Stephanie Kruiper, Karin van Look*

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### II. Helping students choose a course within interdisciplinary education

*Carlijn van den Boomen, together with Karin van Look, Jonne Vulperhorst, Esther Slot*

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### III. Pleading in Virtual Reality: improving student experience and student learning

*Emanuel van Dongen, together with M.A. Hegeman, R. Drbohlav Ollerton*

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### IV. How to support students' learning from research papers?

*Angela Ivask, together with Siiri Velling, Edith Viirlaid, Kaire Uibolet*

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### V. A challenge-based interdisciplinary undergraduate concept fostering translational medicine

*Michael Schakelaar, together with F.A. Valentijn, S. Crnko, M.A. Hegeman, W.D. Schot, W.J.A.G. Dictus, T. ten Broeke, N. Bovenschen*

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### VI. Understanding the role of conducting design-based research in teacher education

*Micha Ummels, together with Michiel Dam*

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# I. Creating Community Engagement in Higher Education. Appreciative Inquiry into Developing an Action Learning Course at Utrecht University.

POSTER

<i>Authors</i>	<i>Anna Ben Shalom, Danielle Vlaanderen, Stephanie Kruiper, Karin van Look</i>	<i>Key-words:</i> <ul style="list-style-type: none"><li>• <i>Higher Education Research</i></li><li>• <i>Community Engaged Learning (CEL)</i></li><li>• <i>Action Research (AR)</i></li><li>• <i>Open Pedagogy</i></li></ul>
<i>University</i>	<i>Utrecht University</i>	
<i>Faculty</i>	<i>Social Sciences</i>	
<i>Department</i>	<i>Educational Sciences</i>	

## Introduction

The study provides the story of re-designing a community-engaged learning course – Action, learning and impact (ALI) - at Utrecht University.

## Aim and research question

The aim of the research is to analyze how to maintain engagement in the learning process of students and in the community. The research questions are as follows: (1) How can we maintain the good in the ALI course? (2) How can we deepen community engagement?

## Set-up and method

The methodology follows the principles of educational action research and appreciative inquiry (Coghlan, 2019, Noffke S. & Somekh, 2009). Data was generated via qualitative learning conversations with various stakeholders: participants, teachers, and partners mid-way through and at the end of the course.

## (Preliminary) results

Students feel engaged in co-learning when they are in a safe environment that allows for sharing different perspectives and therefore facilitates free and equal collaboration. Recognizing the diversity of each stakeholder requires them to develop intercultural and citizenship skills. The practice-oriented way of engaging with literature allows reflection and helps understand the significance of their project. Comprehending that change and learning by doing brings opportunities has implications also on their personal life and mental health because they feel valuable agents in society. Seeing students and themselves freed from old habits, helping students deal with the discomfort of the unknown, and discovering possibilities outside of their bubble of thinking, as well as witnessing the principle of working with people

makes teachers feel engaged. Partners feel engaged when lasting societal change occurs via co-creation in which equal relationships without hierarchy, the principle of not-knowing, and process rather than product-driven focus guide the learning in the community.

## Conclusion

In line with the principles of Knowledge Producing Schools (Bigum and Rowan, 2009), our experience suggests that aligning the curriculum with CEL and AR principles, organizing action learning sets, creating diverse assessments based on AR methodology, and allowing the freedom to work on authentic tasks in cocreation with specialists in the communities help maintain and deepen community engagement. In line with the attributes of open pedagogy (Hegarty, 2015, Werth and Williams, 2022), (1) developing trust, confidence, and openness by re-negotiating relationships, (2) encouraging innovation and creativity by avoiding solution-oriented thinking, allowing the discovery of diverse perspectives and autonomous decision-making, (3) exchanging freely ideas by abolishing the traditional classroom environment and organizing learning sets, (4) using reflective practices in a connected learning community that focuses on the process rather than the product, and finally (5) having learning goals, assignments, and assessment that reflect these principles will make the engagement of each stakeholder a long-term success.

## References

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- Coghlan, D. (2019). *Doing Action Research in your own organization* (5th ed.). London: Sage.
- Hegarty, B. (2015). Attributes of Open Pedagogy: A Model for Using Open Educational Resources. *Educational Technology*, 55(4), 3-13. Retrieved from <https://www.jstor.org/stable/44430383>
- Farnell, T. (2020). *Community engagement in higher education: trends, practices and policies*. Luxembourg: Publications Office of the European Union. doi:10.2766/071482
- Noffke S. & Somekh, B. (Ed.). (2009). *The SAGE Handbook of Educational Action Research*. CA: Thousand Oaks: SAGE.

## II. Helping students choose a course within interdisciplinary education

POSTER

<i>Authors</i>	<i>Carlijn van den Boomen<sup>1</sup>, Karin van Look<sup>2</sup>, Jonne Vulperhorst<sup>2</sup>, Esther Slot<sup>2</sup></i>	<i>Key-words:</i> <ul style="list-style-type: none"><li>• <i>Educational Development</i></li><li>• <i>Interdisciplinarity</i></li><li>• <i>Student choices</i></li><li>• <i>Student guidance</i></li></ul>
<i>University</i>	<i>Utrecht University</i>	
<i>Faculty</i>	<i>Faculty Social and Behavioural Science</i>	
<i>Department</i>	<i><sup>1</sup>Psychology, <sup>2</sup>Educational development &amp; training</i>	

### Introduction

Dynamics of Youth offers the minor 'Interdisciplinary perspectives on child development in societal challenges', in which students learn to collaborate in interdisciplinary teams. Furthermore, students learn to detect and contribute relevant knowledge and skills to societal problems related to child development. Within the minor, students take two compulsory interdisciplinary courses to broaden their view and acquire interdisciplinary skills. In addition, they select two elective courses in a discipline other than their own, with the goal to deepen disciplinary knowledge and skills relevant for interdisciplinary projects. However, students likely need help in choosing the elective courses.

### Aim and research question

This project aims to design a tool to help students choose an elective course in an interdisciplinary context. To this aim, we answer the following research questions in a two-part project:

Part 1. What are the reasons students have for taking specific courses, and what is the weight of each reason compared to the others?

Part 2. How can we guide students in choosing elective courses?

### Set-up and method

Part 1.a. Selection of reasons: Based on interviews with UCU tutors and students from one of the compulsory minor courses, we selected 41 reasons that students express to choose a course.

Part 1.b. Weight of reasons: using a Q-methodology design, 67 students sorted the reasons from "most disagree" to "most agree". Using Ken Q-Analysis\*, we performed a factor analysis to extract so-called composite Q-sorts representing how students sorted the reasons.

Part 2. Design and test an online tool. This part is currently in progress.

### (Preliminary) results

The analyses revealed two factors. The first factor represents reasons that could be summarized as related to broadening a view, and impactful education related to societal issues. The second factor represents reasons that could be summarized as deepening and applying knowledge, on topics that fit one's personality and interests. Furthermore, both factors included the reason that a course should deal with a topic of interest to the student. More students loaded primarily on the first than on the second factor.

### Conclusion

Part 1: The results indicate that two groups of students express different reasons as most important in choosing a course: students look for broadening and impactful courses, or for courses that deepen their knowledge and relate to one's personality. In addition, all students find it important that the topic of the course is of interest to them.

Part 2: Based on the results of part 1, we will design an online tool using a discrete choice design. This tool selects the student's topics of interest, and the reasons to choose a course, and subsequently provides advice for elective courses. This advice functions as a conversation starter that students can discuss in for instance a peer tutoring setting.

### References

- Ken Q-Analysis is a web application for Q methodology designed by Shawn Banasick (<https://shawnbanasick.github.io/ken-q-analysis/>)

### III. Pleading in Virtual Reality: improving student experience and student learning

POSTER

<i>Authors</i>	<i>Dr. E.G.D. van Dongen<sup>1</sup>, Dr. M.A. Hegeman<sup>2</sup>, R. Drbohlav Ollerton MSc<sup>3</sup></i>	<i>Key-words:</i> <ul style="list-style-type: none"><li>• <i>Student experience</i></li><li>• <i>Student learning</i></li><li>• <i>Pleading skills</i></li></ul>
<i>University</i>	<i><sup>1,2</sup>Utrecht University, <sup>3</sup>Tilburg University</i>	
<i>Faculty</i>	<i><sup>1</sup>Law, Economics and Governance, <sup>2</sup>Social Sciences, <sup>3</sup>School of Humanities and Digital Sciences</i>	
<i>Department</i>	<i><sup>1</sup> Law, <sup>2</sup>Educational development &amp; training, <sup>3</sup>Communication and cognition</i>	

#### Introduction

Recent research showed the potential of immersive VR to contribute to legal skills development [McFaul & FitzGerald 2019]. By using VR technology, first-year UU law students meet each other in a virtual courtroom; they give feedback to their peers with a specially designed feedback app and read about their performance afterwards. This creates a unique opportunity for students to practice their pleading skills, implement feedback, and further improve their performance in the courtroom.

#### Aim and research question

Our aim is to study which elements of our VR-approach (positively) influence student experience and student learning. Our research question is: What effect does our VR-exercise, in combination with peer feedback, have on student experience and (perceived) learning?

#### Set-up and method

To assess these questions, a questionnaire measuring constructs of interest was developed and pilot tested for validation purposes. The constructs of interest included: Value/Usefulness (I); Competence (II); Confidence (III); Reflective thinking (integrated with the feedback construct; IV). The validation of the questionnaire will enable to test the following hypothesis: practicing pleading in a virtual, authentic courtroom is a useful and valuable experience for students, which increases perceived competence and promote confidence. Moreover, it will enhance reflective thinking and self-regulation skills when effective peer feedback is provided. The

following steps were taken for the development of the questionnaire and pilot testing:

1. The literature has been searched for validated questionnaires, or clusters of questions that can measure the four mechanisms mentioned.
2. The clusters of questions were combined, translated and contextualized into a (Dutch) questionnaire. These questions/items were discussed with experts.
3. The assembled questionnaire was pilot tested in our specific teaching context (n=57). We conducted confirmatory factor analysis to test construct validity, as well as Cronbach's alpha to test reliability or internal consistency using R.

#### (Preliminary) results

All constructs showed good internal consistency, except for confidence. As a result of the validation procedure two questions have been slightly altered and the questionnaire's validity will be assessed again within the main study. Preliminary results after VR exercises showed that students about half the time perceived to be competent (M=3.167), usually felt confident (M=3.991) and valued VR (M=3.848) and about half the time valued their reflective thinking (M=3.539).

#### Conclusion

The validation procedure pointed out that most constructs were valid and consistent; the construct for confidence needed some revisions. The revised questionnaire will be used in the next step: measuring the development of students through courses in which is pleaded multiple times, including the use of VR, and comparing various student populations with each other.

#### References

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- McFaul & FitzGerald (2019) A realistic evaluation of student use of a virtual reality smartphone application in undergraduate legal education. Br. J. Educ. Techn. 1-18
- Winstone & Carless (2019) Designing effective feedback processes in higher education: a learning-focused approach. Routledge.

## IV. How to support students' engagement while learning from research papers?

POSTER

Authors	Angela Ivask <sup>1,2</sup> , Siiri Velling <sup>1,3</sup> , Edith Viirlaid <sup>1,3</sup> , Kaire Uibolet <sup>4</sup>	Key-words: <ul style="list-style-type: none"><li>• Research papers</li><li>• Student engagement</li></ul>
University	University of Tartu	
Faculty	<sup>1</sup> Faculty of Science and Technology	
Department	<sup>2</sup> Institute of Molecular and Cell Biology, <sup>3</sup> Institute of Chemistry, <sup>4</sup> Centre for Professional Development	

### Introduction

One of the aims of higher education is to foster students' development of conceptual knowledge, information processing, and critical thinking skills (Lucia & Swanberg, 2018). Research papers have been used in higher education teaching to support the development of these qualities with the aim of introducing and discussing the evidence from science (Bimczok & Graves, 2019). The traditional format of adopting research papers in the learning process is the following: the teacher chooses the article, one or two students present the article, and during the meeting, participants are expected to discuss the article (Rodriguez & Hawley-Molly, 2017). The main limitation of this approach is the lack of students' engagement in the learning process and the discussion, especially among those who have not read or do not present the article (Bimczok & Graves, 2019). Therefore, it is vital to support and guide students in the process of selecting, reading, and presenting the papers.

Therefore, we developed three new formats for adopting research papers in teaching the courses with the aim of encouraging students' engagement while reading and discussing the research papers in environmental chemistry and genetics courses.

### Aim and research question

This study aims to describe the factors that students described as engaging while learning from research papers. Which elements from the new formats do students describe as enhancing their engagement?

### Set-up and method

We developed three different formats that were adopted in the learning process of the courses. Student feedback was used to analyze what students perceived as supporting their engagement.

### (Preliminary) results

Preliminary findings indicate that sharing the aim, and the focus of the task, giving a possibility to make choices, guiding the process of choosing, reading, and concluding the paper, and offering space for discussion are vital for engagement.

### Conclusion

Our experience indicates that it is possible to adopt research papers in the learning process and to encourage engagement at the same time. However, it is vital to consider different aspects of the format that support engagement.

### References

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- Rodriguez, R. G., & Hawley-Molloy, J. S. (2017). Revamping journal club for the millennial learner. *Journal of Graduate Medical Education*, 9(3), 377-378.

## V. A challenge-based interdisciplinary undergraduate concept fostering translational medicine

POSTER

<b>Authors</b>	M.Y. Schakelaar <sup>1</sup> , F.A. Valentijn <sup>1</sup> , S. Crnko <sup>1</sup> , M.A. Hegeman <sup>2</sup> , W.D. Schot <sup>2</sup> , W.J.A.G. Dictus <sup>4</sup> , T. ten Broeke <sup>1</sup> , N. Bovenschen <sup>1,3,4,5</sup>	<b>Key-words:</b> <ul style="list-style-type: none"><li>• Translational Medicine</li><li>• Interdisciplinary collaboration</li><li>• Communication</li><li>• Critical thinking</li><li>• Creative problem-solving</li><li>• Motivation.</li></ul>
<b>University</b>	Utrecht University	
<b>Faculty</b>	Medicine, University Medical Center Utrecht (UMCU)	
<b>Department</b>	<sup>1</sup> Department of Pathology (UMCU), <sup>2</sup> Educational Consultancy & Professional Development, <sup>3</sup> Center for Academic Teaching; <sup>4</sup> Center for Education (UMCU) <sup>5</sup> Center of Translational Immunology (UMCU)	

### Introduction

Translational medicine (TM) is an interdisciplinary branch of biomedicine that bridges the gap between (fundamental) biomedical research and patients from bench-to-bedside<sup>1,2,3</sup>. The goal of TM is to improve global health by combining disciplines, resources, expertise, and techniques in biomedicine. Fundamental TM skills include interdisciplinary collaboration, communication, critical thinking, and creative problem-solving (so-called 4C's)<sup>1,2</sup>. TM is currently limited in undergraduate (bio)medical education programs with limited opportunities for collaboration between disciplines.

### Aim and research question

We aimed to develop a novel interdisciplinary challenge-based educational concept, grounded in the theoretical framework of research-based education, to implement TM in undergraduate (bio)medical education. Research question: "How does this novel educational concept improve 4C skills, and motivation?"

### Set-up and method

Medicine and biomedical students were introduced to an authentic clinical problem through an interdisciplinary session with patients, medical doctors, and scientists. Next, students collaborated in mixed groups to design laboratory-based research proposals addressing this problem. Finally, the best proposal was executed hands-on by mixed student teams in a consecutive interdisciplinary laboratory course. For this, we founded the Bachelor Re-

search Hub, a dedicated wet laboratory within the UMC Utrecht where students can do biomedical research together with researchers and stakeholders. Questionnaires and focus groups were used to evaluate the efficacy of the educational concept on student learning, especially regarding the 4C's and student motivation.

### (Preliminary) results

Questionnaire results revealed that students developed 4C skills and acquired a 4C mindset. Working on an authentic patient case positively contributed to communication, critical thinking, and creative problem-solving skills. Working in an interdisciplinary setting helped students to develop collaboration and communication skills. Furthermore, focus groups showed that students were motivated by (i) the relevance of their work that made them feel taken seriously and competent, (ii) the patient involvement that highlighted the societal relevance of their work, and (iii) the acquisition of a realistic view of science.

### Conclusion

We have showcased a widely applicable challenge-based undergraduate (laboratory) concept fostering TM in education that positively stimulates the development of 4C skills. Students find working on an authentic patient case and interdisciplinary working motivating because they feel competent, they feel taken seriously, and they understand the social relevance better. Additionally, in the laboratory course, medical students were motivated by the technical skills and biomedical knowledge of biomedical students, while biomedical students valued the clinical perspective of the medicine students.

### References

- <sup>1</sup> Bovenschen N, et al. Towards Bachelor Research Hub networks to foster transdisciplinary challenge-based education in Translational Medicine | Nature Portfolio Bioengineering Community. (2021)
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- <sup>3</sup> Albani S, Prakken B. The advancement of translational medicine-from regional challenges to global solutions. *Nat Med.* 2009 Sep;15(9):1006-9. doi: 10.1038/nm0909-1006. PMID: 19734876.

## VI. Understanding the role of conducting design-based research in teacher education

POSTER

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University	Utrecht University <sup>1</sup> , Leiden University <sup>2</sup>	• Teacher education curriculum
Faculty	Faculty of Science	• Professional development
Department	Freudenthal Institute for science and mathematics education <sup>1</sup> ; ICLON <sup>2</sup>	

### Introduction

Teacher research has become an important aspect of the teaching profession. Therefore, students in our teacher education institutes (pre-service teachers, PST) are required to conduct practitioner research in a semester course with the aim to bridge the gap between theory and practice and develop insights into practical problems and consequences of their actions in the classroom. A review from literature about the effects of practitioner research by in-service teachers shows three important goals of teacher research: A. to improve their own individual practice; B. to develop as a professional in a more general sense, and C. to explicitly contribute to a knowledge base, which showed to be rare (Zwart et al. 2015). However, two issues still seem to be unclear: 1. What (type of) goals PST have and are activated by conducting design-based research in their teacher education course; and 2. The *mechanisms* by which practitioner research can lead to such attaining these goals. In the course, we use elements of the SoTL approach by having PST systematically investigate questions surrounding their student (in secondary education) learning in a systematic way, combined with investigating the conditions under which learning takes place, what learning looks like and how it can be improved - and that they do this with a view not only to improving their own practice, but also to contribute to improving education in general.

### Aim and research question

The aim of this research is to shed light on the two aforementioned issues (what type of goals PST have in relation to the design-based research they conduct and the mechanisms by which these goals are attained). We focus on the course *subject related methodology biology 2* in which PST learn didactical approaches in order to teach biology in classroom. The following research question is addressed: *How does design-based research support goals of pre-service (biology) teachers?* This study might inform adjustments of the course.

### Set-up and method

In this study we use a laddering tool interview (a well-established procedure in the field of psychology) as a method to construct goal systems of PST related to their design based research project. Goal systems consist of a hierarchy of goals and means, in which goals of the highest levels reflect important aspects of someone's identity, providing a window in what motivates someone (Janssen et al. 2017).

### (Preliminary) results

In an explorative study goal systems of four PST were constructed during laddering tool interviews, giving insight which goals were important (and activated) and through which route (mechanisms) in each research phase these goals were attained.

### Conclusion

The goal systems (and types of attained goals) all show the relevance PST attribute to the role of (and phases of) design-based research in the education course. Individual goal systems give insight in PST ideas and beliefs on effectively teaching biology, now and in their future carriers as biology teachers.

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## VII. Social connectedness in higher education: evidence from first year learning communities

POSTER

<i>Authors</i>	<i>Jet van der Zijden, Theo Wubbels</i>	<i>Key-words:</i>
<i>University</i>	<i>Utrecht University</i>	<ul style="list-style-type: none"><li>• <i>First-year experience</i></li></ul>
<i>Faculty</i>	<i>Faculty of Science, Faculty of Social and Behavioural Sciences</i>	<ul style="list-style-type: none"><li>• <i>Learning communities</i></li><li>• <i>Classroom social climate</i></li><li>• <i>Peer interactions</i></li><li>• <i>Teacher interactions</i></li></ul>

### Introduction

First-year learning communities (FLC's) are known to improve student integration, retention and learning (Tinto, 1997). However, the FLC classroom social climate and its potential role in contributing to this positive effect of FLC's have not been studied.

### Aim and research question

The aim of our research is to elucidate students' perceptions of the social climate within the Utrecht Undergraduate Pharmacy FLC's by exploring students' perceptions and valuation of peer and teacher interactions within these learning communities during the first year, relate these perceptions to the dimensions of the classroom social climate and clarify which characteristics can explain positive or negative experiences of interactions. Our research questions are:

1. How do students perceive and value peer and teacher interactions in Utrecht Pharmacy FLC's during the first year and how are the perceptions related to the social classroom climate?
2. What factors promote or hinder a positive student valuation of the interactions with peers and teacher in Utrecht Pharmacy FLC's and how are these factors related to the classroom social climate?

### Set-up and method

Fourteen first-year students from the cohort 2020-2021 participated in semi-structured individual interviews in the first (T1), second (T2) and fourth period (T3) of the first year. To substantiate the results for answering research question 1, first year students (n=100) completed an online questionnaire on the quality of peer and student-teacher interactions at the end of the year.

(Preliminary) results

Our results show that interactions in the FLC are positively valued when students experience learning support from peers and teacher, social connectedness with peers and teacher, and active participation in class which corresponds to the classroom social climate dimensions student cohesiveness, student involvement and personalization (Fraser et. Al, 1986). Students' valuation of interactions was influenced by a variety of factors of which online classes was the one factor that hampered all valued social climate dimensions. Furthermore, social connectedness with peers and teacher was not only one of the most valued classroom climate aspects, it also indirectly promoted learning support and active participation.

### Conclusion

Our results provide insight in the process of integration and on how to promote this integration on a classroom level and may therefore be used as a guideline for improving classroom climate. Specifically, our study highlights the importance of social connectedness in the classroom which, in our opinion, needs an increased amount of attention in higher education.

### References

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## VIII. The use of patient-videos in pharmacology teaching

### PRESENTATION

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<i>University</i>	<i>Utrecht University</i>	
<i>Faculty</i>	<i>Medicine</i>	
<i>Department</i>	<i><sup>1</sup>Center of Education <sup>2</sup>Translational Neuroscience</i>	

### Introduction

Prescribing medications is one of the core tasks of most physicians. The Pharmacology and Pharmacotherapy track within the bachelors medical curriculum prepares medical students for this task. Within the UMCU Pharmacotherapy is taught in large groups (60-300 students) using text-based case-studies. Although this instructional method has been effectively used for knowledge dissemination, teaching pharmacology by focusing solely on the medical aspects of a disease often fails to take into account the patient's perspective. Unfortunately, for this reason, many patients feel themselves unheard by their doctors when prescribing drugs. This could lead to treatment non-adherence and ultimately therapy failure. Although direct contact with patients is the best way to facilitate experiential learning, to do this in a controlled way for a large cohort (300+ students) is however challenging. Therefore to integrate the patient's perspective into pharmacology education, patient video's will be used during pharmacology lessons. Videos provide an authentic stimulus through a holistic depiction of the patient and their immediate surroundings and students feel that videos might help in retention in memory<sup>1</sup>. The impact videos have on pharmacology teaching and learning about prescribing drugs have however not been investigated.

### Aim and research question

The goal of the current study is to evaluate whether videos could be an effective tool in teaching pharmacotherapy to a large cohort of medical students where the patient's perspective as well as the medical content are addressed.

### Set-up and method

Two to three teaching moments in pharmacology will be chosen to include patient videos within the bachelors curriculum. Students will be shown interviews with patient's sharing their experience with medications in their own home setting, following which students will answer questions related to appropriate the choice of medications based on the patient's clinical condition but also their preferences. Following the video-based case-study students will be asked to fill up a short questionnaire using Wooclap. Participation will be voluntary and anonymous. The questionnaire students would be asked about 1) their experience of using video's as a teaching tool, 2) Understanding how videos could video's help in disseminating knowledge on Pharmacology and 3) gaining insight into the importance of patient's perspective while prescribing medications.

### (Preliminary) results

Videos have been used in pharmacology teaching, but no detailed survey on student experience were conducted. A single pilot study showed that students were enthusiastic about videos as a teaching tool. The detailed study outlined above will be conducted in the latter part of the academic year 2022-2023.

### Conclusion

he process of filming and developing of videos as effective teaching tools is timeconsuming. The benefit is that videos, once made, could not only be re-used but could also be implemented for teaching other subjects besides pharmacology. However, how students process videos and use videos for their learning is a crucial factor which will guide its broader application. The results of this study will shed more light into the suitability of video's as a teaching tool for pharmacology.

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## IX. Using an adaptive learning system for optimal dissection class preparation

### PRESENTATION

<i>Authors</i>	<i>Bo van Leeuwen<sup>1</sup>, Steven Raaijmakers<sup>2</sup>, Claudia Wolschrijn<sup>1</sup>, Beerend Hierck<sup>1</sup>, Daniela Salvatori<sup>1</sup></i>	<i>Key-words:</i> <ul style="list-style-type: none"><li>• <i>Self-regulated Learning</i></li><li>• <i>Online Education</i></li><li>• <i>Formative Assessment</i></li></ul>
<i>University</i>	<i>Utrecht University</i>	
<i>Faculty</i>	<i><sup>1</sup>Faculty of Veterinary Medicine, <sup>2</sup>Faculty of Social and Behavioural Sciences,</i>	
<i>Department</i>	<i><sup>1</sup>Department of Clinical Sciences <sup>2</sup>Educational Development &amp; Training</i>	

### Introduction

A solid knowledge in anatomy is fundamental for veterinarians to safely and successfully provide clinical care and perform surgery. Students at the faculty of veterinary medicine in Utrecht have limited opportunity to perform cadaveric dissection on donated animals to foster deep learning. Unfortunately, students struggle to acquire the necessary factual anatomy knowledge prior to the dissection classes to fully utilise the learning opportunities. Often, they are not effective in self-regulated learning (1) and an important aspect of self-regulated learning is monitoring study progress (2). Using an innovative online adaptive fact-learning system (Slim Stampen) could support students with this activity.

### Aim and research question

This study aims to investigate if students engage in deeper learning activities during the dissection class, when an online adaptive fact learning system is used to acquire the prerequisite anatomical terms. Specifically, to determine if students engage in more explorative, experiential and collaborative behaviour during dissection to obtain a spatial and 3D comprehension of the animals' body.

### Set-up and method

All students who are enrolled in the 2nd year bachelor course "Digestie" (~N=220) will receive instructions on how to access and use 'Slim Stampen'. At the beginning of the course, students are allocated to a dissection group based on their student number (4 groups in total, ~55 students per group).

### Crossover phase

-A week before the first dissection class, 2 dissection groups will be chosen at random who will have access to 'Slim Stampen' to prepare for class, while the other 2 groups will have no access.

-A week before the second dissection class, the 2 dissection groups who did not had access to 'Slim Stampen' can now use the learning system to prepare for class while the other 2 groups will have no access.

-At the start of each dissection class, students are invited to take an online survey consisting of: 1) A questionnaire about students' perceived competence regarding the learning goals they need to achieve (modified Perceived Competence Scale). 2) A factual anatomy knowledge test containing 10 open ended questions.

-During each dissection class, a researcher will make field notes describing the behaviour of students, interaction between students and between students and teachers. The researcher is blinded for the intervention, meaning he/she is unaware if the group had access to 'Slim Stampen' to prepare for class.

### Interview phase

-Students (N=10) will be invited to participate in a focus group and interviewed about their experience with 'Slim Stampen' and perceived usefulness.

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## X. Connective thinking for integration of the General Education curriculum

### PRESENTATION

<i>Authors</i>	<i>Rianne van Lambalgen</i>	<i>Key-words:</i>
<i>University</i>	<i>Utrecht University</i>	• <i>Interdisciplinary Education</i>
<i>Faculty</i>	<i>Humanities</i>	• <i>Knowledge</i>
<i>Department</i>	<i>Philosophy and Religious Studies (Liberal Arts and Sciences)</i>	• <i>Technology</i>
		• <i>Note taking</i>

### Introduction

Liberal Arts Education typically contains a general education component (GE): a combination of courses in different disciplines to have the student gain knowledge from different scientific disciplines/areas in Humanities, Natural Sciences and Social Sciences. To gain integrated interdisciplinary knowledge, It is important that students of such a curriculum are able to connect knowledge from the different GE courses (Dekker, 2020; Haynes and Brown-Leonard, 2010). This research focuses on how a tool to make smart notes can facilitate the integration of knowledge by encouraging connective thinking, defined as making connections between insights or ideas that are not necessarily similar or bound together (Sill, 1996).

### Aim and research question

The aim of this research is to see how students can be supported in making connections throughout their GE curriculum by structuring their notes through the tool: Obsidian (<https://obsidian.md/>), designed as a digital tool to write smart notes (Ahrends, 2017). In this tool, knowledge is structured following the technique of a slip-box, used by the researcher Luhmann, organizing knowledge per topic instead of per course, which makes it easier to make branches within one topic and connections between topics (Ahrends, 2017; Basu, 2020).

### Set-up and method

Fifteen first year students at Liberal Arts and Sciences (LAS) have volunteered to use Obsidian throughout their first year to take notes. The study starts with a training to teach the students how to take smart notes and explain how Obsidian works. With use of a case study method, the students who use Obsidian will be studied in detail: how they apply the tool, their

output in terms of notes taken and their reflections on tool use. In addition, a questionnaire will be send to first year students at LAS to measure their note-taking behaviour and existing data from all participants on connective thinking, such as the connections they make in their written reflections, will be analyzed.

### (Preliminary) results

There are no results yet, but the first five students received the training and are working with the tool. During the training the students showed enthusiasm towards the tool, however they did find it difficult to see how this would work in practice. Therefore it is important that their process needs guidance, especially at the start of applying Obsidian.

### Conclusion

This presentation discusses SoTL research when results are highly contextdependent and shows how a case study can be applied as a method in combination with quantitative data on connective thinking.

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## XI. Towards European Student Research HUB Networks to Foster Transdisciplinary Challenge-Based Education

### PRESENTATION

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<i>University</i>	<i><sup>1</sup>Department of Pathology, University Medical Centre Utrecht (UMCU), The Netherlands; <sup>2</sup>ISGlobal, Hospital Clinic, University of Barcelona, Spain; <sup>3</sup>Trinity College Dublin, Ireland; <sup>4</sup>Eötvös Loránd University, Hungary; <sup>5</sup>Utrecht University, Netherlands; <sup>6</sup>Center for Academic Teaching, Utrecht University, The Netherlands; <sup>7</sup>Center for Education, UMCU, The Netherlands; <sup>8</sup>Center of Translational Immunology, UMCU, The Netherlands</i>	<ul style="list-style-type: none"> <li>• <i>CHARM-EU</i></li> <li>• <i>Transdisciplinarity</i></li> <li>• <i>Challenge-Based</i></li> <li>• <i>Student Research HUB.</i></li> </ul>
<i>Faculty</i>	<i>Medicine</i>	
<i>Department</i>	<i>Pathology</i>	

### Introduction

Life, disease prevention, and health(care) are rapidly evolving. This demands for future professionals that can address grand challenges to reach societal impact. For this, so-called 4C skills (collaboration, communication, critical thinking, and creative problem-solving) are essential. The existing curricula in higher education have to be expanded so students are connected to a wide spectrum of disciplines, (inter)national partners, and (extra-academic)stakeholders. We believe that the transition towards globally-oriented transdisciplinary challenge-based education as an innovative framework in higher education is the appropriate way forward.

### Aim and research question

We aimed to develop a novel transdisciplinary, international, challenge-based educational concept, grounded in the theoretical framework of research-based education, to improve transdisciplinarity, academic skills, and motivation in higher education. Research question: "How does this novel educational concept improve 4C skills, transdisciplinary mindset, and motivation?"

### Set-up and method

The novel EU-funded joint-degree Master's program in Global Challenges for Sustainability, CHARM-EU<sup>1</sup> meets this demand. CHARM-EU is a European University that started in September 2021, formed by an alliance of five research-based universities. During the first edition of the CHARM-EU module Health Challenges & Solutions (six-week full-time elective module), we briefed a group of international students through a plenary session with researchers, medical specialists, patients, and stakeholders who all came together in Barcelona<sup>2</sup>. We posed students the grand challenge: 'How should the world deal with future pandemics?'. Subsequently, students were divided over three universities to frame hypotheses and execute research from different disciplinary perspectives. To facilitate this, we have developed multiple designated Student Research HUBs – physical and interdisciplinary innovation spaces within the heart of university faculties that have short lines to local research, researchers, faculty, and stakeholders. Transdisciplinary collaboration among these HUBs is reinforced by weekly online plenary work meetings, workshops, lectures, and symposia. This innovative European Student Research HUB network allows students from different disciplinary backgrounds, researchers, faculty, and stakeholders to collaborate transdisciplinary and internationally on a single major societal challenge in the health domain<sup>2</sup>.

### (Preliminary) results

The module was evaluated by anonymized written questionnaires and focus groups focused on transdisciplinarity, academic skills, and motivation. Students appreciated the relevance of the global health challenge and the transdisciplinary collaboration. The educational framework inspired, motivated, and stimulated development of academic skills. Additionally, students valued the journey of doing authentic research and the autonomy they were given during this module.

### Conclusion

Altogether, we have showcased a transdisciplinary, challenge-based concept in education that positively stimulates the development of 4C skills. The current module Health Challenges & Solutions of CHARM-EU has generated synergy between research and education in the life & health domain. The innovative concept of European-oriented transdisciplinary challenge-based education allows further upscaling towards a larger Student Research HUB network within and outside Europe with larger groups of students.

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## XII. Evaluating One Book One Campus: shared reading for inclusion and community building

PITCH

Authors	Agnes Andeweg	Key-words:
University	Utrecht University	• <i>Belongingness</i>
Faculty	University College Utrecht	• <i>Community</i>
		• <i>Diversity</i>
		• <i>Shared reading</i>

In Fall 2022, the first UU-wide One Book One Campus (OBOC) took place as part of the Diversity Month, organized under the umbrella of the UU Equality, Diversity and Inclusion Office. Everyone at UU was invited to read the same book and join live reading groups/events, there was a creative contest, and a public interview with the writer, Bernardine Evaristo. The aims of OBOC were (1) to get conversations going among staff and students about diversity & inclusion issues, (2) to foster students' and employees' sense of belonging to the UU community – one of the strategic goals of UU –, and (3) to promote reading as being part and parcel of academic life. In this project we analyse to what extent participants experienced various elements of OBOC as contributing to these three aims.

Even though OBOC is strictly speaking not part of teaching (classroom) activities, we consider it part of education, and thus part of the education of UU students: reading – also outside your own field – is an important element of intellectual development. As an extra-curricular activity it aims to contribute to feelings of belonging, which is vital for academic performance. As such this project aims to provide insights on conditions for learning.

We monitored and evaluated participation in OBOC at UU through (online and app) surveys, and participant observations, in order to gain insight into the motivations of participants, their experiences, and the principles and mechanisms of effectiveness, following a 'realist evaluation' approach (Realist Evaluation). The reading groups/small events were conducted using the method of shared reading (The Reader)

Preliminary results show that more than a thousand people - students and employees of the UU (35/65% based on survey responses) - participated in OBOC in some way: by buying a book, attending a meet & read event or the (sold-out) public event with Bernardine Evaristo, by discussing the book in a smaller group or tipping off a colleague or fellow student. The shared

reading sessions (Meet & read) were not well attended, though people who did attend were positive about how these meetings brought them into contact with other people and allowed them to exchange ideas. The survey held under participants shows very positive responses on the questions about how OBOC stimulated conversations about diversity. Respondents are also positive but to a slightly lesser extent about how OBOC contributed to the feeling of belonging to the UU community. With the methods we used it is hard to say to what extent the project contributed to increasing reading motivation: the majority of respondents were already motivated readers.

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- The Reader <https://thereader.org.uk>
- Realist Evaluation [https://www.betterevaluation.org/en/approach/realist\\_evaluation](https://www.betterevaluation.org/en/approach/realist_evaluation)



## XIV. Building career competencies and boosting wellbeing in young adults – a comparative intervention study in higher education

PITCH

<i>Authors</i>	Anne R. van Ewijk & Anouk de Regt	<i>Key-words:</i>
<i>University</i>	Utrecht University	• Career competences
<i>Faculty</i>	Law, Economics, and Governance	• Randomized experiment
<i>Department</i>	Utrecht University School of Economics	• Master
		• University
		• Professional
		• Skills

### Introduction

There has been a consistent growth in the number of studies published on career interventions in general and for university students in particular (Whiston et al, 2017; Soares et al, 2022). Two issues emerge. First, there seems to be a predominant focus on career decision-making self-efficacy, while adaptability, self-management (Soares et al, 2022) and understanding the relation between identity and work (Langher et al, 2018) are equally of not more important. The concept of career competencies (Akkermans et al, 2013) adapted to university students (Grosemans & de Cuyper, 2021) captures these elements with the subscales of reflection on motivation and work exploration. Second, while career interventions appear to have an overall positive effect on participants, we still do not know what types of intervention are more effective than others (Soares et al, 2022; Whiston et al, 2017). Therefore, we have set up a component study, the gold standard for showing specificity (Ahn and Wampold, 2001). A component study attempts to isolate the effect of specific aspects by comparing treatments with and without these specific aspects. To be more precise, we propose a dismantling design: an entire treatment with all aspects is compared to treatment without this specific aspect.

### Aim and research question

“Will an innovative intervention of behavioral nudging with mobile application add value over and above a classic intervention of a series of group workshops and personal reflective journaling, in the sense that career competences and hopefulness are further increased?”

“Will this effect be more or less prevalent when taking into account students’ capacity for self-regulated learning?”

Based on the outcomes, we can decide whether to incorporate the mobile application as mandatory element in the professional skills course.

### Set-up and method

Approximately 330 USE master students take the mandatory 2.5 ECTS course “Professional Skills”. To pass the course, students need to obtain a ‘pass’ for two modules. Both modules are formatted in line with socio-constructivism, which was found to have better effects in this area than other models (Langher et al, 2018). The first module consists of a series of online seminars to help students work on and write a professional goal-setting exercise that includes personal values, strengths and weaknesses, life event analysis, goal-setting, mitigation of likely obstacles to goal achievement, writing a personal positioning statement, and updating their personal profile (e.g. CV, LinkedIn, personal website). The second module consists of four career-skill-related workshops. Students choose out of different workshops (e.g. Python, consulting, time management, CV writing, speedreading, TED-level presenting, conversation management, teambuilding, risk auditing, Agile project management, big data analysis) and write reflection assignments in which they report on how they applied the skill in practice. Only students who indicate their interest in participating in the mobile app experiment, are randomly divided into control (N=40) and intervention (N=60) group. The nudges that students in the treatment group receive via the mobile application are all related to the goal-setting exercise, targeting both cognitive and emotional processes (Schwartz et al, 2015) to foster vocational identity development. The pre-test is done in October 2022. The post-test will be done in May 2023.

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## XV. Self-regulation of first-year students and self-directed learning

PITCH

Authors	Rachel van Egeraat-Verbeek & Tim Frijters	Key-words:
University	Hogeschool Leiden	• Teaching & Learning approaches
Faculty	Healthcare (Gezondheidszorg)	• Self-regulation
Department	Department of Physiotherapy	• Metacognition

### Introduction

In the curriculum of the Physiotherapy program, student's self-management plays a major role. However, students seem to have difficulty with the many choices they are confronted with during their first year. They are challenged in directing their learning process and within that, self-regulation plays an important role. According to literature the ability to self-regulate relies on the executive functions, and the questionnaire BRIEF-A maps these executive functions. Furthermore research shows, that teachers appear to have a significant role in the process of self-directed learning. What teaching methods could be successfully applied during skills lessons to achieve self-regulated learning and which are effective methods according to literature?

### Aim and research question

The aim of this study is to explore the executive functions of first-year students physiotherapy and to investigate whether there is a possible relationship with study results. This aim resulted in the following research question:

What is the developmental status of executive functions of first-year Physiotherapy students? Do these functions affect study results and which interventions are used in applying the cycle of self-directed learning during skills lessons?

### Set-up and method

A mixed-method : respectively a cross sectional study including a validated instrument (BRIEF-A) and an observation of interventions of teachers was used. The whole cohort of first year students was invited to fill in the BRIEF-A questionnaire at the same time. Participation was not obligatory. Next to that, teachers were asked to be observed during their skills lesson.

### (Preliminary) results

The included students (n=28) had significantly higher scores at the BRIEF-A on the subscales of

metacognition than on the subscales of behavioral regulation. Interesting scores were measured on four subscales: taking initiative, working memory, planning and organizing, and task evaluation. Study result can partly be explained by the scores on the BRIEF-A, for the subscales orderliness, task evaluation and planning and organizing. There is a variation between teachers (n = 5) in knowledge and application of the interventions of self-directed learning within the lesson.

### Conclusion

It is likely to expect that the executive functions of first-year Physiotherapy students are not yet fully developed. This is especially true for metacognitive skills such as planning and organizing, working memory and evaluation of tasks. A number of executive functions may impact study results. More conscious attention can be paid in class to integration of the self-directed learning. This requires an expansion of the knowledge and skills of teachers. To expand this knowledge, an observation form was developed.

Recommendation: In order to understand the executive functions of first-year students, the BRIEF-A will be used in 2022-2023 in a major study at multiple departments at Hogeschool Leiden. In addition, it has added value to subsequently discuss the results of the BRIEF-A with the students in order to create more awareness of their self-regulation. The outlines of the results can be discussed with the teaching team, so that they have more realistic expectations of the students.

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## XVI. Social-Artistic Collaboration in Higher Education

### PITCH

<i>Authors</i>	<i>Floor W. Mijland</i>	<i>Key-words:</i>
<i>University</i>	<i>Utrecht University</i>	• <i>Educational development</i>
<i>Faculty</i>	<i>Humanities</i>	• <i>Curriculum design</i>
<i>Department</i>	<i>Media and Culture Studies/ Communication Information Sciences</i>	• <i>Practice-based learning</i>
		• <i>Socialartistic collaboration</i>
		• <i>HEI's</i>

### Introduction

Due to societal changes, the profession of artists and social workers have changed too. In the arts, art projects no longer center around a modernist conception of 'art'. More often, they are aimed at bringing people (and things) together and make a positive change in the world. In social work, professionals are asked to be more flexible and empathic, viewing their clients and their environment more holistically, working with concepts such as 'positive health'. Several of the positive health goals can be achieved through art participation, whilst simultaneously allowing artists to fundamentally engage their practice with and for a community. In order to prepare and introduce students from both domains to their future profession, several higher educational institutions in the Netherlands have engaged in mutually beneficial social-artistic collaborations, bringing together students and professionals in the reality of the workplace. So far, these projects have proven to be highly successful. However, actually bringing these parties together, creating an equal partnership, achieving both social and artistic goals, as well as creating professional learning experiences have proven to be difficult tasks, demanding constant coordination between everyone involved. Learning from the practice-based experiences of several members of the Social-Artistic Students and Practices Network (SASP-network) of the National Centre of Expertise for Cultural Education and Amateur Art (LKCA), this research project was aimed at designing a dialogical tool to support the development of social-artistic education.

### Aim and research question

Aim of the study was to create a tool for curriculum design supporting social-artistic collaborations in higher educational institutions (HEI's). The research question was formulated as follows: how can I design a product which supports the development of social-artistic education in HEI's?

### Set-up and method

The study consisted of desk research and qualitative interviews with work field practitioners. Due to the exploratory nature of the research project, the effects of the developed product on student learning and teaching could not be measured.

### (Preliminary) results

The main result of the study was the dialogical tool created for educational development and curriculum design.

### Conclusion

Based on the positive reactions from the work field practitioners who participated in the interviews and design process, the dialogical tool offers a valuable instrument to open dialogue, especially after the incorporation of the tips and recommendations of the respondents on the first draft of the tool.

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## XVII. Mentoring studenten: studievaardigheden

PITCH

<i>Authors</i>	<i>Bald de Vries</i>
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Eerstejaars studenten nemen in het eerste blok deel aan het mentoraat dat is ingebed in een blended module Rechten in Utrecht. Elke werkgroep (25 studenten) heeft een mentor (een ouderejaars student) die de groep wegwijs maakt in de studie en met de groep juridische en academische vaardigheden oefent. Wat sinds 2020 nieuw is, is dat studenten uitgenodigd kennis te nemen van studievaardigheden met online informatie en opdrachten, op basis daarvan te reflecteren op de eigen studiehouding en deze eventueel aan te passen. Het onderzoek richt zich op dit laatste aspect.

Het doel is na te gaan of studenten daadwerkelijk 'iets doen' met de uitnodiging na te denken over studievaardigheden voor wat betreft de eigen studiehouding, hoe groot die groep is en uit welke type student die groep bestaat. Dit doel leidt dan ook tot de volgende (inventariserende en evaluerende) hoofdvraag die uit twee delen uiteen valt:

1. Welke (groepen) van studenten maken gebruik van de module?
2. Op welke wijze draagt de module bij aan een verrijking van hun studiehouding?

Met verrijking bedoel ik of een student zich bewust wordt van hun studiehouding, daarop reflecteert op basis van de aangeboden informatie en die houding eventueel aanpast, en daarvan desgevraagd verslag kan doen. Met de bevindingen hoop ik ook in staat te zijn de module aan te passen cq. te verbeteren. De hypothese is dat als een student bewust gebruik maakt van de module zij beter in staat is haar studiehouding vorm te geven en te expliciteren, en dat dit leidt tot meer betekenisvol studeren.

Het onderzoek wordt kwalitatief/beschrijvend van aard en wordt uitgevoerd in het studiejaar 2023-2024 onder zowel eerstejaars studenten als ouderejaars studenten op basis van verschillende surveys en een reeks van interviews en panelgesprekken met studenten uit de diverse jaarlagen, mentoren en tutoren. De eerste bevindingen hoop ik medio blok 2 paraat te hebben en te kunnen presenteren op de I-SoTL in november in Utrecht en vervolgens weer op het U-SoTL tijdens het UU Onderwijsfestival in maart 2024.



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