Third Utrecht Scholarship of Teaching & Learning Conference
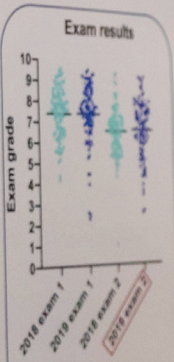
4 MARCH 2021

Utrecht University

Centre for Academic Teaching

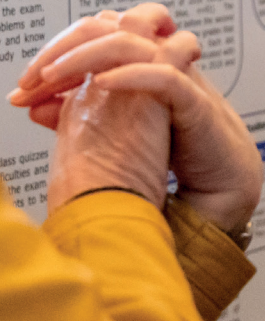*This booklet contains all the abstracts as presented during the Third Scholarship of Teaching and Learning Conference (online) on Thursday the 4th of March 2021.*

Welcome!

Welcome to the Third Utrecht Scholarship of Teaching and Learning Conference.

After two successful editions, this conference has become a benchmark in research on teaching and learning at Utrecht University. We are very pleased that you are (again) attending the conference even during these challenging times. Due to the current circumstances of Covid-19, it is unfortunately not possible to meet each other in person. Nevertheless, the online continuation of the conference also offers new possibilities as speakers from four different countries will join us. We welcome dr Anna Wach and dr Joanne Furmańczyk from Poznań University of Economics and Business, dr Katarina Mårtensson and dr David Larsson-Heidenblad from Lund University, dr Gry Green Linnell and dr Camilla Fogh from the University of Southern Denmark, and dr Jessie Paterson from the University of Edinburgh. We look forward for them to inspire novel ideas and share their knowledge on SoTL with us.

After the keynote sessions, we offer five different workshops. For participants who are relatively new to SoTL we offer a workshop on what a SoTL project entails and a workshop on the first steps in designing your own SoTL project. The other three workshops have a more experienced target group, and will focus on the assessment of ethics, the possibility to apply for a SoTL grant, and the Roadmap for Teaching Innovation and Scholarship: a step-by-step instrument with practical tips and theoretical knowledge to shape your SoTL project. After the break, academic teachers will present their scholarly work on education on posters in a wide range of topics. The posters and video pitches can be found on the online platform. During the online sessions, you have the opportunity to meet them and reflect and debate on their research. For today, we hope you will enjoy the workshops and posters that this conference offers.

We wish you an interesting, interactive, and inspiring conference.

On behalf of the
Centre for Academic Teaching,

Zora van Harten,
Event manager
Irma Meijerman,
Senior Fellow
Veronique Schutjens,
Senior Fellow
Maarten van der Smagt,
Senior Fellow
Esmee Steenwinkel,
Intern
Bald de Vries,
Senior Fellow
Lindy Wijsman,
Educational Consultant

Please do not hesitate to contact us if you have any comments about the conference or suggestions for future meetings on on cat@uu.nl or see www.uu.nl/cat.

Educational Scholarship? Why, what and how?

This is the Third Utrecht Scholarship of Teaching and Learning Conference. The success of the conference relies on the participants and the contributions of all those teachers who are engaged with educational scholarship. Utrecht University tries to support this educational scholarship, to stimulate a research-informed teaching and learning practice. In research-informed education, disciplinary knowledge, practical knowledge and scientific knowledge are combined to enhance student learning. The aim of educational scholarship is to enlarge the knowledge-base on academic teaching. Both Scholarship of Teaching and Learning (SoTL) and Discipline-Based Education Research (DBER) are research-informed approaches to teaching. When the aim of conducting research on your education is primarily to inform your own teaching practice, we speak about SoTL. When the aim is towards contributing to the knowledge base of teaching within your discipline, we speak about DBER. There is no strict division between these approaches, rather they form a continuum of decreasing context-specificity, see figure 1.

What is Scholarship of Teaching and Learning?

The main aim of the systematic approach of SoTL is to improve the teaching and learning of students. To do so, teachers are invited to examine their own classroom practice, record their successes and failures, and ultimately share their experiences so that others may reflect on their findings and build upon teaching and learning processes.[1] The principles of SoTL are that, based on a problem or question that teachers have about their own teaching, a research question is formulated, literature research (related to teaching in the discipline) is performed, data is collected about the effectiveness of teaching on the learning of the students, and the data is shared, either locally or wider at a conference or through a peer-reviewed publication.[2] In SoTL the emphasis is therefore not on general educational theory creation, but on the application of (disciplinary) educational knowledge for one's own teaching.

A typical example of the title of a SoTL-publication is: Evidence for teaching practice: The impact of clickers in a large first-year biology classroom environment.

What is Discipline-Based Educational Research?

The main aim of DBER is to contribute to the general knowledge about teaching within the discipline (and sometimes even generalizable outside your discipline). DBER thus emerges from the discipline and is grounded in the discipline's priorities, worldview, knowledge and practices. It investigates teaching and learning within a discipline and is informed by, and complementary to, general research on learning.[3] As is the case between SoTL and DBER, again there is no strict division between DBER and general education research, but a continuum with increasing generalizability.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 supports SoTL and DBER by showcasing good

examples and by bringing lecturers in contact with each other. This conference aims to provide a platform for sharing results. Educational scholarship is part of the mission of the centre, therefore we offer programmes, funds and information for teachers who would like to become involved in either SoTL and/or DBER.

Utrecht University developed its own model to specify the systematic process of educational scholarship: The Utrecht Roadmap for Teaching Innovation and Scholarship. The roadmap is unique in that it combines a commonly used research cycle often described in SoTL-literature (i.e, identify the problem, formulate a research question, designing a study, collecting data, analyse, report) with an instructional design model), the so-called 'CIMO' logic method.[4] This CIMO method uses a specific context (C) to explore an intervention (I) which is thought of being implemented, by figuring out which (learning) mechanisms (M) will be activated in the learner due to the intervention, so that certain desired (learning) outcomes (O) will be reached. Explicitly thinking about these concepts in connection to each other and thereby using what is known about the mechanisms of teaching and learning in the literature will ensure that: each project is research-informed, focusses on student learning and stimulates teachers to think about the 'why' of starting to innovate or improve their teaching.

Two experts focus on educational scholarship. Dr. Femke Kirschner (Educational Consultancy & Professional Development) supports teachers in conducting a scholarship project. Dr. Irma Meijerman runs a Senior Fellow project at the Centre for Academic Teaching, focussing on supporting teachers to do SoTL projects.

The Special Interest Group SoTL iis an informal community of teachers that are interested in research-informed teaching in their own classroom, to provide evidence of or get insight in the learning of their own students. The SIG is the place where you can share your experiences and ideas with other teachers from all disciplines. The SIG meets approximately four times a year.

SoTL Grants have been established to stimulate the SoTL approach within UU. Teachers can submit proposals with a maximum budget of €5.000.

Lecturers can develop their knowledge and experience with educational scholarship within a professional development programme. The CAT offers the Educational Research Training Programme. The UMCU offers the Teaching Scholars Programme aimed at experienced teachers in health professions education. This programme is aimed at senior teachers who want to gain more in-depth knowledge of education and get engaged in DBER.

An e-module 'Your teaching under a magnifying glass' has been developed. This module provides guidance for teachers who want to get involved in SoTL. The e-module will be translated in English at a later stage.

If you have questions about SoTL or DBER or want more information about opportunities for support, you can always contact CAT: cat@uu.nl.

Literature references

[1] Hutchings, P., & Shulman, L. E. (1999). The scholarship of teaching: New elaborations, new developments. Change, 31(5), 10–15.

[2] Williams, K.M. (2015) Doing research to improve teaching and Learning. A guide for college and university faculty. 1th Ed.; Routledge: Oxon, UK

[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

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Programme

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08:30 — 09:00
Kick-off
We will start the conference with a plenary kick-off. After a warm welcome by Irma Meijerman, we will have an informal quiz and the opportunity to get in touch with the other participants.

09:00 — 10:00
Keynotes
During the first session of the third Utrecht Scholarship of Teaching and Learning conference, lecturers from four different European universities will share and exchange their SoTL projects. In what ways have their projects enhanced teaching and learning at their university? What are the trials and errors in favour of acting on scientific theories? And, what can our various universities learn from each other?" Choose one of the two sessions and join the conversation! **Session 1:** In this session we will discuss the pathways to extend professionalism in the scholarship of teaching and learning. Anna Wach and Joanna Furmańczyk will present three projects on academic development training, teaching competences, and the course for young university teachers. Gry Green Linnell and Camilla Fogh will present their feedback programme. **Session 2:** In this session we open up the conversation on embedding SoTL projects within the institution. Building on three funded projects, Jessie Paterson will show how small funds from the university have had significant impact. This includes projects on resources for first-year in-coming students, student learning on empathy, and dealing with failure. Katarina Mårtensson and David Larsson-Heidenblad will highlight the principles and practices of embedding SoTL in a research institutional culture where SoTL has been used as a strategy to enhance teaching and learning for over 20 years. As an example, they will present a project based on the framework of Decoding the disciplines (Pace & Middendorf, 2004).

10.00 — 10.30
Coffee/tea break

10:30 – 11:15
Workshops
Ethics assessment of research in higher education
By Roald Verhoeff and Mariëtte van den Hoven (Both part of are part of two different Ethical Research Committees: the ERC Science & GeoSciences and the FETC Humanities)

The Utrecht Roadmap for Teaching Innovation and Scholarship: A step-by-step roadmap to shape your SoTL project
By Lindy Wijsman

From idea to SoTL publication
By Yolanda van Beek

SoTL practices for beginners
By Peter van Capel

How to apply for a SoTL grant
By Rik Vangangelt

11:30 — 12:30
Posters of fellow teachers
Academic teachers of various disciplines will present posters of studies of their scholarly approaches of teaching and share more profound research on education within their discipline. All participants can experience and learn from these teachers who implemented systematic and evidence-based improvements in teaching and learning or did research on relevant teaching and learning topics within their discipline.

The UU annual Onderwijsparade takes place in the afternoon. This year's theme is Connecting Communities. You are very welcome to join the afternoon programme as well.

Submitted abstracts

On the following pages you can find the abstracts of posters as shown during the conference.

01 **The Development of Moral and Ethical Reasoning in the Law Curriculum**
Emanuel van Dongen
& Steven Raaijmakers

02 **Critical thinking in undergraduate humanities education: co-creating intended learning outcomes**
Merel van Goch, Mariëtte van den Hoven, Vincent Crone

03 **"When do students succeed?" Assessing interdisciplinary understanding in PPE papers**
Jan Pieter Beetz, Karin Scager, Esther Slot

04 **Heuristic trees as an instrument to support autonomous problem solving**
Rogier Bos

05 **Student reflection on own competencies in pharmacology and pharmacotherapy: A pilot study**
Rahul Pandit, Mirjam Gerrits

06 **Reflecting on intercultural encounters in the field: themes, dimensions and depth**
Gery Nijenhuis, Veronique Schutjens, Gemma Corbalan

07 **Online peer feedback for interdisciplinary learning**
Rianne van Lambalgen

08 **A shift in the approach to teaching based on the study among novice academics of Poznań University of Economics and Business**
Anna Wach

09 **Improving Student Success Through Culturally Responsive Pedagogy**
Grace Ebron

10 **Training Law students like Athletes: Experimenting with the Constraints-Led approach in Clinical Education**
Jasper Sluijs, Herman Kasper Gilissen, Karin van Look

11 **Baseline assessment in higher education: a case study of science popularization skills at Liberal Arts and Sciences**
Presenter: Florentine Sterk, co-author: Merel van Goch

12 **Exploring the practical value of the Teacher Evaluation Questionnaire**
Pim Bruin, Nouchka Tick and Maarten van der Smagt

13 **Designing a Lesson Study approach to train Teaching Assistants**
Roald Verhoeff

The Development of Moral and Ethical Reasoning
in the Law Curriculum

**Emanuel van Dongen
& Steven Raaijmakers**

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Faculty of Law, Economics and Governance
resp. Social and Behavioural Sciences
*Department of Law resp. Educational
Development and Training*

Key word(s)
– Teaching & Learning approaches

▶ INTRODUCTION

Developing the capacity of ethical decision
making is an essential professional
competence for lawyers. For assessing and
providing insight into the development of
ethical decision making in law students,
the six stages of moral development as
described by Kohlberg (1984) can provide
a frame of reference. What teaching and
learning activities in the law curriculum
should be used to give these stages form?
Inspired by international literature on
legal ethics, various teaching methods and
learning activities will be tried out in the
law curriculum: learning activities involving
conversations about moral dilemmas
(I; honours teaching in bachelor and
master), in-class reflection papers based
on hypothetical or narrative examples (II;
caput on legal Ethics), experiential learning
based on own experiences in a simulation
(III; practical simulation course) or based
on real experiences by means of clinical
teaching in a real law firm (IV; legal Clinics).

▶ AIM & RESEARCH QUESTION

Which teaching method is most useful
for the development of moral and ethical
reasoning of law students? Four different

teaching methods are compared using the
Defining Issues Test (DIT) and are further
explored using focus groups. The four
teaching methods include either working
with (hypothetical) dilemma's (I), in-class
reflection papers (II), experiential learning
based on a hypothetical law real-life law
firm (III) or based on clinical teaching in
cooperation with an actual law firm (IV),
both supplemented with reflections on
one's own moral experiences.

▶ SET-UP & METHOD

First of all, the DIT is used to measure the
pre- and post-level of moral development
of law students. The DIT is based on
Kohlberg's stages of moral reasoning
(Kohlberg 1984). By means of a repeated
measures ANOVA (4 groups, pre- and
post-measurements) we try to identify
which learning activity yields the most
gain in moral development (as measured
by the DIT). Additionally, the results are
supplemented by focus group meetings
with students and semi-structured
interviews with teachers. The focus
groups provide us information about
students' perception of the effectiveness
of the method and the contribution of the
teacher to their moral development. Focus
groups enable us to gain more in-depth
information concerning the reasons why
students learn more from one learning
activity compared to another. Additional
information about the effectiveness and
utility of the method is gathered using
semi-structured interviews.

▶ (PRELIMINARY) RESULTS

Data are being collected and the results
will be available at the time of the SoTL
conference. Earlier semi-structured
interviews with teachers have already been

conducted. One interesting observation was that empathizing was important for this kind of learning activities and storytelling might help with teaching. However, storytelling can be difficult for teachers. Teachers with a practical background might be especially suited for this kind of education.

▶ CONCLUSION

This—still on-going—research will yield information about how to design effective education for the development of moral and ethical reasoning. Lessons learned will be shared with the Academic Teaching community.

Literature references

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· Kohlberg, L. (1981). *Essays on moral development, Vol. 1: The philosophy of moral development.* San Francisco, CA: Harper & Row.
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Critical thinking in undergraduate humanities education: co-creating intended learning outcomes

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▶ INTRODUCTION

This project concerns the ability to think critically as an intended learning outcome in the context of undergraduate education in the humanities. Critical thinking is a complex construct consisting of knowledges, skills and attitudes. It is defined as: "purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based." (Facione, 1990; Abrami et al., 2015). Critical thinking is operationalized in different teaching and learning practices: e.g., (teaching) problem analysis, writing literature reviews, debating. The Faculty of Humanities houses a diverse range of (under)graduate programmes covering fields such as languages, cultures, history and philosophy. We understand the nature of humanities as a position within Biglan's classification (1973). In this, the humanities are described as a non-applied and soft discipline that mainly uses qualitative, interpretative research methods. The scholarly perspective of the humanities—both as a field of study and as a faculty—is visible in shared intended learning outcomes of the various programmes. In these learning outcomes critical thinking is often mentioned as important, even considered characteristic to humanities education. But, we wonder whether students fully grasp what aspect of critical thinking they are stimulated to develop. If students have different experiences with and views on the critical thinking skills and attitudes they are supposed to develop, this has consequences for constructive alignment of education. Even though critical thinking, including its role in education, has been studied extensively, application in humanities education is still at its infancy.

▶ AIM & RESEARCH QUESTION

The aim of this project is to develop, in co-creation with students, a holistic and comprehensive definition of critical thinking for the humanities, to be used in intended learning outcomes and ultimately to constructively align our teaching practices. Our research question is: How can intended learning outcomes be understood and phrased so they reflect both the nature of humanities education as well as students' experience of humanities education, specifically with respect to critical thinking?

▶ SET-UP & METHOD

Our project focuses on second-year undergraduate students in two courses of the Faculty of Humanities. First, students fill out a questionnaire with quantitative and qualitative questions on critical thinking. Second, we contextualize the questionnaire results in focus groups, aiming to co-create a definition of critical thinking as an intended learning outcome for humanities education. Third, based on

the results of the questionnaire and the first round of focus groups, as well as more extensive literature review, the definition of critical thinking and resulting intended learning outcomes will be finetuned and proposed to students in further focus groups.

▶ (PRELIMINARY) RESULTS

The project will result in intended learning outcomes related to the competence of critical thinking that better fit the nature of the humanities and students' experience.

▶ CONCLUSION

Through constructive alignment, teaching and learning will benefit from both teachers and students having a better understanding of what critical thinking means in this specific context. Reflection on the humanities and on related intended learning outcomes will give students a better grounding in their own discipline, in the humanities, and in academia. For both theory and practice, it is important that concepts like critical thinking are defined in a holistic and comprehensive way, incorporating perspectives from all fields of academia.

Literature references

· Abrami, P. C., Bernard, R. M., Borokhovski, E., Waddington, D. I., Wade, C. A., & Persson, T. (2015). Strategies for teaching students to think critically: A meta-analysis. *Review of Educational Research*, 85(2), 275–314.
· Biglan, A. (1973). The characteristics of subject matter in different academic areas. *Journal of Applied Psychology*, 57(3), 195–203. https://doi-org.proxy.library.uu.nl/10.1037/h0034701
· Facione, P. A. (1990). *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction. Research findings and recommendations.* Newark, DE: American Philosophical Association.

"When do students succeed?"
Assessing interdisciplinary understanding in PPE papers

Jan Pieter Beetz, Karin Scager, Esther Slot

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Law, Economics & Governance, Humanities
Utrecht University School of Governance

▶ INTRODUCTION

Students of the PPE interdisciplinary program at Utrecht University must develop an interdisciplinary understanding. This can be defined as the capacity to integrate knowledge and modes of thinking in two or more disciplines to produce a cognitive advancement, in ways that would have been unlikely through single disciplinary means (Mansilla, 2005). However, little knowledge exists on the particular challenges faced by students integrating insights from our core disciplines: philosophy, politics, economics, and history. In the previous year it has proven difficult to reliably assess interdisciplinary understanding in our bachelor program, especially the final phase of Repko's approach: integration (Repko & Szostak 2016). The dearth of teaching materials for PPE further complicates this situation. Our study focuses on *assessment* of integration in the Capstone course (year 2) in which students need to write an interdisciplinary paper. We will develop, implement and evaluate a rubric for assessing interdisciplinary understanding in co-creation with the teacher team.

▶ AIM & RESEARCH QUESTION

This study aims to establish clear criteria to assess interdisciplinary thinking in the UU's PPE programme. Our research question is: How to assess integration of insights from three or more PPE disciplines within an interdisciplinary paper?

▶ SET-UP & METHOD

The project will take place in block 3 of 2020-2021. We will take the following steps in order to answer the research question:

· Using literature as well as with input from the teaching team to evaluate and further develop the existing PPE rubric (Scager 2019). We will first conduct a systematic analysis of the current literature on assessment. Next, the teachers will independently read two papers from last year: one that succeeded well in integrating insights and one that did not. We will then discuss whether *integration* was visible (or not) in these papers in a central meeting. Insights deducted from these efforts will be incorporated into a contextualized rubric for the course.

· At the end of block 3, we will discuss teacher experiences with the rubric. Teachers will write down their questions, remarks and concerns and bring them to the general teacher meeting, where we will together discuss the 'border cases' in order to reach consensus.

· Additionally, we will ask students both at the beginning and end of the course to write down what they know of the problem that they will be investigating/have investigated during the course. This step will ensure

that students assessment aligns with learning outcomes on interdisciplinary understanding.

▶ (PRELIMINARY) RESULTS

Based on this research, we hope to map the 'cues' within interdisciplinary PPE papers that point towards integration, which currently remains a black box. These insights will be used for further developing the PPE rubric.

▶ CONCLUSION

The results of this project will benefit teachers with the UU's PPE programme and possibly also for those teaching in other interdisciplinary contexts.

Literature references

· Mansilla, V. B. (2005). Assessing student work at disciplinary crossroads. *Change: The Magazine of Higher Learning*, 37(1), 14–21.
· Repko, A. F., Szostak., R. (2016) *Interdisciplinary Research: Process and Theory.* Sage Publications Inc.

Heuristic trees as an instrument to support autonomous problem solving

04

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Science
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Key word(s)
– Problem solving, heuristics

▶ INTRODUCTION

There is a broad consensus on the importance of problem solving both as a learning goal and as a teaching method. Problem solving is an essential academic skill. However, implementing problem solving into a course is challenging, since it seems to require careful and intensive guiding of individual students. We report on a design study of a new interactive digital instrument, named heuristic tree, that provides support to students while problem solving, and at the same time stimulates the cognitive process of compression (*see http://edspace.nl/pyth*).

▶ AIM & RESEARCH QUESTION

How do heuristic trees facilitate the autonomous domain specific problem solving?

▶ SET-UP & METHOD

In a number theory course for in-service teachers (at the Hogeschool Utrecht) all tasks were accompanied by heuristic trees. In this context we studied the affordances and limitations of this help-seeking instrument, how their use influences the way students approach problems and domain specific learning. The data consist of videos of two groups of students at work and interviews with them afterwards, as well as questionnaires with all students.

▶ (PRELIMINARY) RESULTS

By providing just in-time support, heuristic trees allow for independent, autonomous work on problems. By design, heuristic trees provide concepts, techniques and statements decompressed into steps and cases as one clicks on cards along a branch. This supports students to overcome being stuck by providing help in small steps, leaving following steps to be worked on, hereby allowing students to maintain ownership of the solution.

▶ CONCLUSION

Our findings show that heuristic trees clearly facilitate problem solving for a broad range of average-achieving students. The main mechanisms involved are providing students contextualized, just-in-time support aimed at decompressing cases and steps as well as providing self-regulated feedback on their problem-solving attempts. By using heuristic trees systematically, students develop their problem-solving skills, as they become more aware of the different phases, experience the compression-decompression dynamic, and obtain better help seeking behaviour.

Literature references

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Student reflection on own competencies in pharmacology and pharmacotherapy: A pilot study

05

Rahul Pandit, **Mirjam Gerrits**

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Medicine
Translational Neuroscience

▶ INTRODUCTION

The goal of Pharmacology and Pharmacotherapy (P&PT) education at the medical faculty is to prepare future doctors to safely prescribe medicines. It is however known that medical students often feel unprepared while prescribing drugs during the clinical clerkships, leading to errors in prescriptions later during their practice[1]. The bachelor phase of the medical curriculum provides students with a theoretical basis essential for clinical clerkships. However, besides summative examinations, there are no other means to concretely examine whether students have achieved their learning goals. Interestingly standard course-evaluations focus predominantly on teaching delivery rather than reflection on one's learning habits, the achieved learning goals and self-motivation. The feedback obtained from such questionnaires is often sub-optimal to trigger major curricular changes. In order to enable students to efficiently utilize their clinical clerkships and ultimately develop proper prescribing skills, P&PT education in the bachelors has to optimized. For this, a thorough evaluation of P&PT teaching is needed, based on which teaching can be improved in the future.

▶ AIM & RESEARCH QUESTION

The current research was conducted to thoroughly evaluate of the P&PT teaching in the bachelors in order to identify its strengths and weaknesses. The aim was to study whether current teaching methods sufficiently support students in achieving their learning goals.

▶ SET-UP & METHOD

A 40-point questionnaire incorporating elements of the theory of constructive alignment and the self-motivation theory and was divided into 4 subparts, each addressing a separate domain. The questionnaire consisted of the following subparts: A) How motivated are the students to study P&PT? B) How do students rate their level of competence in various P&PT topics? C) Does the current form of examination sufficiently test student knowledge? D) To what extent are the teaching methods and educational tools considered useful and used by the student? Participants were requested to indicate the extent of (dis)agreement for statements based on a 7-point Likert scale. The research was approved by the Dutch society for Medical Education (NVMO). In the pilot phase, thirty third year medical students were invited to fill in the questionnaire.

▶ (PRELIMINARY) RESULTS

The response rate for the entire questionnaire was 25% (9) for all parts and 90% (17) for part A. The Cronbach alpha for the questionnaire was 0.88. The majority of students understood the importance of P&PT for their profession, enjoyed and found the subject interesting. However, a substantial percentage of students

indicated not to prepare themselves prior to P&FT class; but doing so before examinations. The majority of students favored small tutorials to large groups and indicated a need for practice tests and interdisciplinary F&FT lessons.

▶ CONCLUSION

Despite the limited number of participants, the pilot phase helped in gaining insight into student perception in this representative student population. Even though students enjoy P&PT education, a substantial part of the students engage in passive learning methods which might lead to poor knowledge retention in the longer term[2]. The pilot phase of the study contributed to the validation of the questionnaire in a representative population. The survey will be further distributed in a larger group of students. As a subsequent step, a focus group with students will be created for further input on specific topics. Based on these results, the pharmacology curriculum will be gradually revised.

Literature references

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Reflecting on intercultural encounters in the field: themes, dimensions and depth

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06

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Key word(s)
– Teaching & Learning approaches
– Reflection, intercultural competences

▶ INTRODUCTION

MSc Degree students in International Development Studies leave their classroom to do fieldwork abroad. Well-developed intercultural competences—the ability to develop targeted knowledge, skills, and attitudes (e.g. the three dimensions of intercultural competences) that lead to visible behaviour and communication that are both effective and appropriate in intercultural interactions (Deardorff 2006)—are vital to successfully carry out such fieldwork. However, immersion in a different cultural setting does not itself assure intercultural learning: an active learning environment is needed to achieve this (Huber & Reynolds 2014). We developed a learning trajectory to train their intercultural competences, which was im-plemented for the first time in 2019-2020. One crucial ingredient of the trajectory is the written reflection on an intercultural encounter while in the field, so with someone who is perceived to have a different cultural affiliation.

▶ AIM & RESEARCH QUESTION

This study aims to deepen our under-standing of the practice of reflection on intercultural encounters. It does so by 1) describing the characteristics of the intercultural encounters reflected on by the students, in terms of themes and actors involved; 2) analyzing the dimensions of intercultural competences addressed by students; and 3) exploring the depth of reflection and whether this relates to dimensions of intercultural competences and themes/actors involved.

▶ SET-UP & METHOD

Our analysis is based on 51 written reflections on intercultural encounters of MSc Degree students in International Development Studies. We analyzed these reflections in a qualitative way, using Deardorff's dimensions of intercultural competences and Harland and Wondra's four levels of reflection: Non-Reflection, Understanding, Reflection, and Critical Reflection. We used a scoring frame, based upon a thorough comparison of independently assigned scores by the three researchers involved.

▶ (PRELIMINARY) RESULTS

The majority of students addressed encounters dealing with inequality, hierarchy and gender, and in terms of actors with respondents and research partners. Regarding the dimensions of intercultural competences, most students referred to skills and attitude as key to the success of their cultural encounter. The majority of the students demonstrate the level of Understanding and Reflection in particular; Critical Reflection was present in few reflections.

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▶ CONCLUSION

Our preliminary findings show that
the depth of reflection differs greatly
among the students. The analysis of
the relationship between the depth of
reflection and the dimensions of inter-
cultural competences called upon—and
whether this also varies among types of
students, themes, or actors—helps to
develop tailormade learning trajectories
to enhance intercultural competences.

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Online peer feedback for interdisciplinary learning

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07

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Key word(s)
– Teaching & Learning approaches
– Peer feedback, Online education

▶ INTRODUCTION

This study focuses on the student evaluation of peer feedback that was implemented in an interdisciplinary research course for second year bachelor students at Liberal Arts and Sciences, Utrecht University. During this course, students collaborate in multi-disciplinary teams to answer an interdisciplinary research question, for which they go through the interdisciplinary research process adapted from Repko and Szostak (2020). One of the steps is to write a disciplinary perspective on the interdisciplinary research question and currently peer feedback is implemented to allow students to learn from each other on their disciplinary writing. Previously, it has been found that peer feedback is effective in student's academic writing (Huisman et.al., 2019). However, it is unknown whether students' interdisciplinary learning is also improved by providing peer feedback. This study investigates interdisciplinary learning from both online and face-to-face peer feedback. Online peer feedback has been found to have positive effects on learning, but also provides logistical benefits regarding organization of peer feedback (van der Pol et.al., 2008).

▶ AIM & RESEARCH QUESTION

The goal of this research is to investigate how students perceive peer feedback regarding their disciplinary academic writing and the effect of the feedback on their interdisciplinary learning. In addition, it compares online peer feedback with face-to-face feedback, looking into how peer feedback can best be implemented for interdisciplinary learning in the future.

▶ SET-UP & METHOD

During the course 'Interdisciplinary research I', peer feedback was arranged such that students from a similar disciplinary specialization provided feedback to each other's disciplinary contribution. In two of the three seminar groups (40 students), students were asked to provide online peer feedback through the tool Feedback Fruits 2.0. In the third seminar group (19 students), the students provided face-to-face feedback during the seminar. All students were asked to fill in a survey, which included (Likert scale) questions regarding their interdisciplinary learning and their perception of the feedback itself. In addition, it contained open questions on advantages and disadvantages of online/face-to-face peer feedback.

▶ RESULT

Results show that students do not give high ratings to their disciplinary learning, both the content and the epistemology of their discipline. In addition, results indicate that students who provided online peer feedback were less positive on what they had learned about their own discipline. Qualitative results show that students

mainly value the opportunity to discuss the feedback with their peers.

▶ CONCLUSION

While online peer feedback has benefits considering logistics and organization of teaching, less students are satisfied with online peer feedback when looking at the effect on their (interdisciplinary) learning. For example, students state that they value the interaction and discussion with their peer when giving and receiving feedback. However, considering that students also value the flexibility of online peer feedback, it is worthwhile to look at ways to improve interaction in online peer feedback.

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A shift in the approach to teaching based on the study among novice academics of Poznań University of Economics and Business

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Key word(s)
– Teaching & Learning approaches
– Academic Skills

▶ INTRODUCTION

The presented research is part of a broader study focusing on the process of becoming a university teacher. The progress towards becoming an educator in an academic environment may be described using three main levels:

1. The initial process of entering the role of an academic teacher.

2. The ongoing developmental process (learning as modifying knowledge structures and skills).

3. The conceptual change in the approach to teaching: towards student-centered model.

▶ AIM & RESEARCH QUESTION

The aim of the research was to find out how the participants of the University Pedagogical Course for PUEB Young Staff changed their beliefs and practices regarding academic teaching and learning.

1. How the approaches to teaching were modified during pedagogical course?

2. What was the role and significance of pedagogical course in changing the approaches to teaching and learning at university?

▶ SET-UP & METHOD

The research was conducted from an interpretative perspective. It was placed in the inductive approach with mix studies. The main research method of the project was the case study with various techniques of gathering and analyzing data, such as: survey (ATI – Approaches to Teaching Inventory), focused group interviews, the portfolio analysis and answers to open questions asked in the evaluations questionnaires of the pedagogical course. In the empirical procedure, both cross-sectional and longitudinal studies were used (measuring approaching to teaching twice: at the beginning and the end of the course iteration). The research was conducted among participants of the University Pedagogical Course for PUEB Young Staff in 2014-2018 (5 iterations of the course).

▶ (PRELIMINARY) RESULT

· The shift from knowledge transfer into creating learning environment (paradigm change: from behavioristic into constructivist approach).

· The ability to distinguish two approaches to teaching; awareness of planning and teaching according to constructivism.

· The course was meaningful for novice teachers in terms of the program, content and experience as well as the opportunity to build the learning community where they are able to share knowledge, skills, problems and achievements.

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▶ CONCLUSION

Implications for practice: competence
professionalization, support for continues
development at the university, educational
offer and training for novice teachers.

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Increasing Teacher-Student Engagement Through Culturally Responsive Pedagogy

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09

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▶ INTRODUCTION

The equity gap in the US higher education context is vast, with Black and Latinx student populations among the lowest in terms of university admission, enrollment and completion rates. Through inquiry into and practice of culturally responsive pedagogy, this presentation aims to share approaches that tap into how all students —but in particular, underrepresented populations—learn best in order to achieve deeper engagement and learning, leading to higher rates of course and degree completion. My practitioner inquiry centers on a pedagogy of love, taking inspiration from bell hooks who writes that "to speak of love in relation to teaching is already to engage a dialogue that is taboo." Building on Tara Yosso's critical race theory-driven interpretation of traditional views of cultural wealth, the counter narrative model of "Community Cultural Wealth" forms the basis for my curriculum and classroom practice, with intentionality on building knowledge and learning on students' social and cultural capital. Other theorists focus on this approach to learning, including Zaretta Hammond's work on the relationship between culturally responsive pedagogy

and cognitive development as well as indigenous ways of learning through the narrative (Yunkaporta). Finally, culturally responsive pedagogy holds promise for all instructors who have struggled with the tension of positive discrimination resulting in higher advice and inflated assessment of students performance.

▶ AIM & RESEARCH QUESTION

How does an instructor approach a classroom with a pedagogy of love and care? How can an instructor balance rigor and accountability while also teaching to the affective domain? Which classroom practices encourage deeper student engagement, resulting in retention and completion of their higher education goals?

▶ SET-UP & METHOD

I analyzed course completion rates of students that received an intentional curriculum of culturally responsive pedagogy to students' affective domain, with the intention of eliminating educational inequities in my classroom. I compared these rates to previous courses where there was no intentionality towards an equitable pedagogy.

▶ (PRELIMINARY) RESULTS

Through practitioner inquiry, I found that by centering my practice on culturally responsive pedagogy, students—nearly all underrepresented (ethnic minorities and first in their families to attend higher education institutions)—completed my course at a much higher rate than in previous courses and displayed a higher level of engagement.

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▶ CONCLUSION

These practices have applicability and implication for all students but in particular for first-generation and students of color in higher education. This pedagogy also increases instructors' engagement with their students and their discipline overall by encouraging ongoing reflection and inquiry into their practice and developing role as an educator.

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Training Law students like Athletes: Experimenting with the Constraints-Led approach in Clinical Education

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▶ INTRODUCTION

In this project we use insights from physical education, to experimentally apply these in our academic teaching. Particularly, we study to what extent the "constraints-led approach" in physical education can also be applied to students enrolled in law clinics.

Traditional physical education presupposes transfer between practice and competition. Specific, repetitive drills coupled with verbal feedback are supposed to prepare the athlete for competitive practice. Research in sports psychology, however, argues against this transfer-based approach (Renshaw, Davids, and Savelsbergh 2010; Bosch 2015).

Alternatively, these authors propose a "constraints-led" approach. Herein athletes learn through manipulation of tasks, environment and individual conditions, and are challenged to find their own movement solutions in a dynamic setting. This involves non-specific drills closely resembling competition with fewer verbal cues by coaches.

We have experienced constraints-led methodologies outside of our academic employment, as a part time sports coach (Jasper) and as a member of the Royal Netherlands Army National Reserve Corps (Herman Kasper). Based in these experiences, we have applied these insights experimentally to clinical education at our law school. Law clinics are a staple of a law school's curriculum, in which students provide pro bono legal advice to real clients. This experiment has been supported by the REBO Education Incentive Fund.

▶ AIM & RESEARCH QUESTION

The aim of this project was to experiment with constraints-led methodology in the clinic "Practicum Water & Klimaat", in order to assess the value of this methodology for clinical education at our law school. To this end, we have employed the following set of research questions:

· To what extent can insights from constraints-led teaching in physical education contribute to skill acquisition in clinical law school education?

· What is constraints-led learning in skill acquisition?

· How can constraints-led learning be applied to clinical law school education?

· How do students experience constraints-led skills teaching in clinical education?

▶ SET-UP & METHOD

This research project has been set up as an investigative study, preparing for a possible randomized controlled trial at a later stage. By means of experiment, we have implemented constraints-led exercises to teach students professional skills before working with clients. These exercises were undertaken by 14 students

of the Dutch language LLM administrative law in the Spring of 2020, as part of the clinic "Practicum Water & Klimaat." The students would end up working with local governments in the Utrecht province to solve water law-related issues in this clinic.

Our constraints-led exercises were part of a day-long training session before the students would first meet with their clients. In this training session we led students through a series of scenarios, incentivizing them to by experience discern a common methodology in problem analysis and abstraction, rather than explaining this methodology ex ante. The hypothesis of this set-up was that it would improve skill retention in students over traditional, linear and explicit skills teaching, making them better prepared to work with the real cases their clients would bring.

The exercises were evaluated by means of a qualitative survey immediately following the training session, and were meant to be evaluated again upon completing the law clinic. Due to Covid-19 circumstances, however, we have only been able to issue the first survey, although most students have expressed their experiences with the clinic through email

▶ (PRELIMINARY) RESULTS

Based on the initial survey, we find that students feel well prepared for working with their clients after the training sessions. Students by majority report:

- Being able to systematically analyze a situation at the start of a project.

- Being able to identify common problems that clients have run into when approaching outside counsel.

- Being able to depart from pure legal analysis and consider the broader, nonlegal context in which clients operate.

▶ CONCLUSION

Given these qualitative results we preliminarily conclude that constraints-led skills teaching can improve skill acquisition in clinical education. We feel encouraged to iterate on our findings and develop a more quantitative study on the efficacy of constraints-based teaching in law clinics.

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Baseline assessment in higher education: a case study of science popularization skills at Liberal Arts and Sciences

11

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Key word(s)
– Assessment
– Writing skills; science popularization;
 baseline assessment

▶ INTRODUCTION

In recent years, the need for education in science popularization skills has become clearer; within the setting of higher education, teaching interventions in science popularization skills are being tested (c.f. Brownell et al., 2013; Mercer-Mapstone & Kuchel, 2016; Poronnik & Moni, 2006). However, most of these studies rely on post-intervention measurements of skills, or base insights on pre-/post-intervention self-report data from students. What is still lacking in these studies is a baseline measurement, that will allow researchers to gain insight into the development of skills as a consequence of a teaching intervention.

▶ AIM & RESEARCH QUESTION

The aim is to fill a methodological gap in popularization writing research. To do so, we wanted to gain insight into the baseline of writing skills in popularization discourse in first-year liberal education students. The research questions are: Which strategies are used by liberal education students when writing a science journalism text? How can the use of each strategy be characterized?

▶ SET-UP & METHOD

We asked first-year liberal education students (Liberal Arts and Sciences, UU) that had just started their academic training to write a science journalism text based on an academic article about the consequences of smartphone use in adolescents. We performed two rounds of text analysis: a deductive round using a framework for science popularization strategies and an inductive round to interpret the use of each strategy.

▶ (PRELIMINARY) RESULTS

Results give insight into how often and in what way different science popularization strategies are used, and as such provide a baseline of writing skills. On a high level, there is homogeneity in the corpus, with the structure of a news article not being adhered to across the board. The use of information from the academic paper shows that students interpret the entire text as a source of research findings. On a lower level, the use of strategies that rely on information from the academic publication (e.g. showing results from the research) show more adherence to the academic genre, whereas strategies that require input from students (e.g. the use of imagery) show more creativity.

▶ CONCLUSION

This baseline measurement gives insight into science popularization skills that liberal education students enter their academic training with. Results show which strategies need explicit teaching in a science popularization training program, as well as themes in academic writing and philosophy of science that require more attention. This

study supports the importance for teachers to perform a baseline measurement; within SoTL but also as an educational practice.

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Exploring the practical value of the Teacher Evaluation Questionnaire

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Key word(s)
– Student evaluation teacher, questionnaire

▶ INTRODUCTION

The use of anonymous student (course) evaluations to evaluate teacher functioning is popular in many universities (Becker & Watts, 1999), but whether student (course) evaluation scores and educational quality are related is open to fierce debate (Stroebe, 2016). Because of a desire for more feedback on their functioning, the Teacher Evaluation Questionnaire (TEQ) has been developed by psychology teachers at Utrecht University themselves to evaluate teacher performance. This instrument provides teachers insight in how their functioning is being perceived by their students and how they compare to other teachers based on evaluation scores. They may use its outcomes for discussion with colleagues and students and subsequently learn from this input. In addition, they provide the TEQ outcomes to their supervisors for the yearly A&D cycle.

▶ AIM & RESEARCH QUESTION

In this study we examine whether this instrument can be used to track teacher development and how this questionnaire is valued by both teachers and students. Here, we focus on a first-order quantitative approximation of whether the instrument can demonstrate teacher growth.

Specifically, we ask whether the average TEQ scores improve during the teacher's tenure.

▶ SET-UP & METHOD

The TEQ consists of 15 questions (1-5 Likert scale) about teacher functioning and four open-ended questions that elaborate upon what the teacher does well and how the teacher could improve. Students are asked to digitally and anonymously fill in the questionnaire in their classroom environment. The teachers are later informed of the complete results. Since 2015-2016, the TEQ has been employed in the first and third quarter, resulting in data for 36 junior Psychology teachers, who mentor and teach two student groups (approx. 20 students per group) during the whole freshmen year.

Early analysis by Tom Sloëtjes (2015) has found the TEQ to be reliable (Cronbachs alpha .86), providing a valid argument to use average scores as a first order approximation of teacher growth. For each teacher and each semester, the average TEQ score was used to compare scores within the first year, and across three years (first semester), using paired sample t-tests.

▶ (PRELIMINARY) RESULTS

Results show no significant difference between the average evaluation scores within the first year (M 4.12-4.04, p=.50), but significantly higher scores in year 2 (M 4.06-4.32, p <.01) and 3 (M 3.96-4.32, p=.018) when compared to year 1. The scores for the first semester of year 2 and 3 do not differ significantly. (M 4.32-4.32, p=.99).

▶ CONCLUSION

We interpret an increase in evaluation scores over time as a sign of teacher growth. Growth therefore appears to become apparent between the first and second year of teaching, after which scores tend to stabilize. Several factors may explain this result:

- Students often form a first impression of the teacher which can persist during the year, resulting in no significant score increase within the first year. When these more experienced teachers teach new student groups in the next year, they are evaluated more positively.

- Importantly, new teachers also partake in a teaching course ('Classroom teaching') during semester 2 of year 1, which helps them improve their teaching skills. These positive effects are not apparent in evaluation scores in semester 2 but do carry over into their second year of teaching.

- The later stabilization of scores may indicate a ceiling effect as scores are already quite high.

In conclusion, these early data suggest the TEQ is able to track growth in teacher development over the years. Future research will focus on aspects like social validity (do teachers and students themselves find the measure useful?) and other relevant questions such as student's thoughts on the most important aspects of teaching and consistency of teachers' functioning over groups.

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Designing a Lesson Study approach to train Teaching Assistants

13

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Key word(s)
– Lesson study, teaching assistant training, novice teachers

▶ INTRODUCTION

At the faculty of Science, senior students are employed as teaching assistants (TAs) to support students during tutorials and practicals. They often have little or no prior teaching experience and this sometimes results in ineffective teaching and interpersonal problems between TAs and students. Our teaching assistant training prepares TAs for five main tasks: preparing the learning process of the student, diagnosing student needs, asking activating questions, giving feedback and providing a productive learning environment. However, transfer of these pedagogical solutions to their actual teaching practice appears ineffective. To address this problem and link theory to teaching practice, we have developed a Lesson Study approach (Fernandez, 2002; Lewis, Perry & Murata, 2006). In our Lesson Study approach we engage TAs in 1) preparation of a lesson, 2) teaching and observation of the lesson and 3) evaluation and redesign of the lesson (de Vries, Verhoef & Goei, 2016).

▶ AIM & RESEARCH QUESTION

Our goal is to empower teaching assistants during their first steps in academic teaching: How can we design a lesson study approach that meets this goal?

▶ SET-UP & METHOD

Based on an initial literature search on Lesson Study specifically focused on teachers that have limited expertise, we will re-design the teaching assistant training. 8-10 short interviews with TAs provide insight into their needs and expectations to further improve the training. During this project the training is now given in 4 subsequent periods in 2020-21. Each period the training is evaluated by means of a questionnaire and 5 to 10 TAs participate in a focus group on the Lesson Study approach. March 5th we are running the course for the second time in this project, but earlier results from a USO study on the TA training will be included.

▶ (PRELIMINARY) RESULTS

The TAs in our project are employed at the departments of Mathematics, Physics or Information and Computing Sciences. According to them, their main tasks are answering questions during tutorials and also assessing and grading assignments. Although TAs experienced practical COVID-related difficulties while observing each other's teaching practice, they valued the lesson study approach in which they collaboratively prepared and evaluated their tutorials. TAs missed some practical guidelines on how to deal with specific cases, most often related to classroom management: i.e. how to deal with students that are not motivated or arrive late in class. As a result, they do not feel fully prepared for their role as Teaching Assistant.

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▶ CONCLUSION

The limited prior pedagogical knowledge of TA's means that the training has to offer some theoretical background, but because we now asked to apply this theory in practice (Lesson Study), it became clear that the theory did not always fit with the task definition of (all) TA's. We suggest to include group discussions on particular practical cases before students engage in a lesson study so as to prepare them to transfer the ideas offered to their teaching practice by a lesson study approach.

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Figure 1

Different approaches of Educational Scholarship

▲ **DISCIPLINE BASED EDUCATION RESEARCH (DBER)**

— Teaching within the discipline
— Educational changes and developments within a discipline
— Curriculum level
— Generalizable findings focused on a discipline

▲ **EDUCATIONAL SCIENCE AS A DISCIPLINE**

— Draws on different research and theoretical paradigms
— Examines education and learning processes (in Higher Education)

▲ **SCHOLARSHIP OF TEACHING AND LEARNING (SoTL)**

— Teaching and learning in the classroom
— Improve student-learning
— Research-informed teaching
— Provide evidence of the learning of your students
— Reflective teaching
— Share your results

Educational Scholarship

Inform teaching strategies within your discipline

Inform education and learning processes

Inform your teaching practice