CONTENTS

1. ABOUT LEARN!

2. OUR PROGRAMME OF WORK
   2.1 Educational neuroscience; brain, learning and development
   2.2 Educational governance, identity and diversity
   2.3 Learning sciences
   2.4 Motivation for lifelong learning in the health professions
   2.5 Child rearing

3. OUTREACH AND CAPACITY-BUILDING
   3.1 Events and seminars in 2019

4. FACTS AND FIGURES
   4.1 Funding
   4.2 Research output
   4.3 Research staff
   4.4 List of staff (with email) and publications
1. ABOUT LEARN!

LEARN! is an interdisciplinary research institute on learning in an institutional and societal context. We study learning and development and the context in which people learn and develop.

We bring together colleagues from the behavioural, social, medical and educational sciences to understand:

- The Micro context of learning of children and adults (including teachers, principals)
- The Meso context of learning, such as the classroom, school organisation, day-care centers, work-based settings or adult colleges
- The Macro context of learning; e.g. the coordination and governance of learning by school boards, local and national governance (e.g. through marketization, network governance, hierarchical coordination), including the cultural and institutional context of learning (norms, values, social blueprint; legal, financial and policy context).

Across these three contexts we work in the following thematic areas:

- Educational Neuroscience; brain, learning and development
- Educational governance, identity and diversity
- Learning Sciences
- Motivation for lifelong learning in the health professions - Developing "Students for life"

In this annual report we present the highlights from 2019. For each of our programmes we introduce our staff members, our key research projects and some of the outreach and capacity-building work we have been doing. Our list of events and seminars showcases the many interesting presentations we have organized last year, while our facts and figures present the financial viability of our institute. We hope you enjoy reading our report and looking forward to working with you in 2020.

Professor Dr. Melanie Ehren
Director of LEARN!
2. OUR PROGRAMME OF WORK

2.1 EDUCATIONAL NEUROSCIENCE; BRAIN, LEARNING AND DEVELOPMENT

How can we understand learning and development of children and young adults in educational contexts from a neuroscience perspective? Our research investigates the brain’s ability to learn and what this implies for the education of children and adults. Our work provides insights into cognitive mechanisms that enable and support learning, including the distinction between explicit and implicit learning and the ‘executive functions’ that allow us to adapt and learn. A good understanding of how children and young adults process information and retrieve knowledge already stored helps us understand how to teach effectively and create an effective school environment.

2.1.1 STAFF

Professor dr. Nienke van Atteveldt
(programme chair; n.m.van.atteveldt@vu.nl)
Professor dr. Lydia Krabbendam
(lydia.krabbendam@vu.nl)
Dr. Mariette Huizinga (associate professor)
Dr. Menno van der Schoot (associate professor)
Dr. Nikkie Lee (assistant professor)
Dr. Mariel van Buuren (assistant professor)
Dr. Barbara Braams (assistant professor)
Dr. Tieme Janssen (assistant professor)
Dr. Jelie Sierksma (assistant professor)
Dr. Elsje van Bergen (assistant professor)
Dr. Eveline de Zeeuw (assistant professor)
Dr. Renske Brouwer (assistant professor)
Dr. Jeroen Pronk (assistant professor)
Dr. Tuongvan Vu (research associate)

PhD students:
Sibel Altikulac
Smiddy Nieuwenhuis
Ilona Benneker
Perline Demange
Sofieke Kevenaar
Kevers Ozmen
Hester Sijtsma
Ruebs Walsh
Beiming Yang

One PhD student joined the programme in 2019:
Zenab Tamimy: the impact of the home environment on academic skills and educational achievement
2.1.2 RESEARCH HIGHLIGHTS

<table>
<thead>
<tr>
<th>Project</th>
<th>Key questions and findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risky decision making in the lab and in real life</td>
<td>A study, funded by a NWO VENI grant, by Barbara Braams, aims to test how risky decision making in the lab is related to real life risky decision making. Lab measures capture specific processes that give rise to risky decision making. However, these lab measures do not always explain substantial variance in real life risky decision making. In this study Braams will test how different lab measures are related to real life decision making, thereby providing insight in which measures to use if we want to investigate real life decision making.</td>
</tr>
<tr>
<td>Improving the validity of educational neuroscience research</td>
<td>Learn! members Nienke van Atteveldt, Marlieske van Kesteren, Barbara Braams and Lydia Krabbendam published an article in Frontline Learning Research, in which they explain several promising directions to improve the ecological validity of neuro-imaging studies on learning and development. Improving ecological validity is important to improve the connection between brain research and real-life learning processes. The abstract of this article can be listened on SoundCloud. Here’s the link to the article [open access].</td>
</tr>
<tr>
<td>Prosocial Behaviour in, and discrimination of children</td>
<td>Jellie Sierksma joined the department of Social Psychology in June 2019. Her research focuses on understanding the development of prejudice, discrimination and prosocial behaviour in 4-12-year old children. She approaches these issues by combining insights from developmental, social and educational psychology, and by using behaviour experimental methods. She is currently conducting her VENI-research in which she examines how children help peers from different ethnic backgrounds. For this project, she is also very interested in understanding how receiving help affects majority and minority group children's self-perceived abilities and learning. In addition, in the VENI-project an intervention is proposed and tested for reducing biases in children’s inter-ethnic helping. As such, this research aims to stimulate peer-to-peer helping and prevent the negative impact of discrimination early in life.</td>
</tr>
<tr>
<td>Genetic Nurturing</td>
<td>Research on the influences of the family environment on children’s behaviour is complicated by the fact that parents provide their offspring with both the family environment and genes. In a design that exploits parental and offspring genotypes, we investigated the influence of parental genes on childhood outcomes through their effect on the children's rearing environment (called genetic nurturing). Eveline de Zeeuw and Elsje van Bergen demonstrated that the environment that parents create, based on their own genetic predisposition for educational attainment, influences their offspring’s educational attainment in adulthood. In contrast, genetic nurturing did not yet play a role in academic achievement and ADHD in childhood. They speculate that the increase of genetic nurturing across the lifespan might be partly due to educational tracking in Dutch secondary schools. See for the pre-print and check out the model.</td>
</tr>
<tr>
<td>Socioeconomic status, genes and educational achievement</td>
<td>Parental socioeconomic status (SES) is one of the strongest predictors of children’s educational achievement. In her Blog, Eveline de Zeeuw reports about her research in which she and colleagues explored the interplay between parental SES and genetic effects on educational achievement. Read her full blog to find out more!</td>
</tr>
</tbody>
</table>

2.1.3 OUTREACH AND CAPACITY-BUILDING

- LEARN! research group SENSOR (Social Educational Neuroscience Amsterdam) wins Ammodo Science Award of 1.2 million euros
- Barbara Braams wins J.C. Ruigrok prijs, prize awarded each year by the Koninklijke Hollandse Maatschappij der Wetenschappen (KHMW)
- Nienke van Atteveldt was elected as the new Vice-President of the International Mind, Brain and Education Society (IMBES)
- Keynote Nienke van Atteveldt at the ORO (Onderwijs Research Dagen) 2019: ‘Hoe kan hersenonderzoek nuttig zijn voor de onderwijspraktijk?’
# 2.2 Educational Governance, Identity and Diversity

The research on ‘Educational governance, identity and diversity’, chaired by Professor dr. Melanie Ehren and Professor Johannes Drerup spans educational governance of schools and systems in the widest sense, including leadership and management of schools, functioning of school boards and educational networks, their accountability and how performance, innovation and improvement of schools are coordinated through various types of governance (e.g. market-based, hierarchical steering or network governance). We also study and explore questions about which educational practices best facilitate the development of children into adults who are able to live in, and contribute to a society that is culturally and religiously diverse. We combine insights from philosophy of education and public administration to study the functioning of schools and school systems.

## 2.2.1 Staff

### 2.2.1.1 Professor dr. Melanie Ehren (Programme Chair, m.c.m.ehren@vu.nl)

Professor dr. Johannes Drerup (Part-time)

Dr. Anders Schinkel (Associate Professor)

Dr. Cor van Montfort (Senior Researcher)

Dr. John Exalto (Assistant Professor)

Dr. Willeke Rietdijk (Post doc)

Dr. Evelien Broekhof (Post doc)

Dr. Judith Conijn (Post doc)

Dr. Lynne Wolbert (Post doc, until 1-8-2019)

Three PhD students joined the programme in 2019:

1. Thomas Kaye: Assessing the capacity of public education systems in developing countries to successfully absorb adaptive learning focused EdTech initiatives aimed at enhancing student outcomes.
2. Olamide David: Exploring autonomous school management within the context of a developing country: the concept, policies and practices of autonomy.

## 2.2.2 Research Highlights

<table>
<thead>
<tr>
<th>Project</th>
<th>PI, team and funder</th>
<th>Key questions and findings</th>
</tr>
</thead>
</table>
| Accountability, capacity and trust to improve learning outcomes in South Africa; a systems approach | Professor Melanie Ehren (Team: Jet Education Services (South Africa), Dr. Andrew Paterson), Open University UK (Dr. Jacqueline Baxter) | This study examines how accountability relationships and processes within South Africa’s education system enable or inhibit the raising of learning outcomes, create inequalities and maintain a divided system of poor and privileged wealthy schools. The project is in its third year (of a total of four years) and reporting from case studies and focus group sessions with schools and district officials.
| Research project Wonder-Full Education and Human Flourishing: Stimulating Children’s Learning, Morality, and Spirituality | Dr. Anders Schinkel (Team: Dr. Willeke Rietdijk, Dr. Evelien Broekhof, Dr. Judith Conijn) | Wonder is not simply an emotion. It is a complex experience comprising a mixture of surprise, bafflement, a sense of importance for the topic, and a desire to keep attention to the object of wonder. Wonder inspires to learn but does the current education system inspire children to wonder? To figure out what children wonder about and how schools promote wonder in children, Anders Schinkel and his team developed two new instruments: the Wonder Chart and the Wonder-Full Education Questionnaire. The Questionnaire is now in its validation stage and all primary school teachers or school leaders are encouraged to fill it out. In case you know someone, spread the link to the questionnaires (Questionnaire primary teachers; Questionnaire school leaders) there is always a need for more participants. If you wonder about the project and you would like to know more about it, check out the project website and read Anders Schinkel’s latest blog.
| Horizontal accountability for learning (Leren door verantwoording) in Secondary Education | Dr. Cor van Montfort (PI) | In this project we explore how public accountability by schoolboards in Secondary Education can contribute to a learning organization and a fruitful dialogue with stakeholders. We do so by a literature review, interviews and above all in four action networks in which participating schoolboards reflect on their accountability dilemma’s and practices. Besides the action networks, we conduct six ‘action researches’ in which we support individual schools in improving their public accountability. Besides support for the participating schools, we will make a tool or guide for improving public accountability that will be useful for the sector as a whole. Cor van Montfort is overall project manager of this project. The project will end at Dec. 31, 2020.
| Horizontal accountability for learning (Leren door verantwoording) in Primary Education | Dr. Cor van Montfort (PI) | A comparable, but smaller, project has been started in the sector of Primary Education. This project is lead by the Hogeschool Arnhem Nijmegen. Cor van Montfort participates as a team member. The project will end at Dec. 31, 2020.
Accountability, capacity and trust to improve learning outcomes in South Africa; A systems approach
(Professor dr. Melanie Ehren)

Key findings from this study are:

• The accountability system in South Africa follows a hierarchical logic with a set of vertical relationships, oriented towards compliance to input and process standards (e.g. implementation of a national curriculum, attendance of students and teachers). Teachers are accountable to their principal and school management team. Schools are held accountable by their school governing body, and districts monitor the quality of schools and teachers. Further up the hierarchy, provincial departments of education are accountable to the national Department of Basic Education.

• Schools in South Africa (particularly those which serve a deprived area and are non-fee paying) view the external accountability as unfair and oppose the monitoring because 1) there is little of support for schools who fail to meet accountability targets due to lack of capacity, 2) those who monitor schools are unable to provide relevant support and advice as they lack subject knowledge or pedagogical knowledge on how to teach large multigrade classrooms, and 3) there is a lack of a shared view on goals underlying the accountability exercise across the system.

• The lack of capacity to monitor and support school quality (e.g. by districts, heads of department), combined with a lack of capacity in schools to meet accountability targets reduces the accountability to a bureaucratic form filling exercise and reduces trust across the system.

• This is particularly prevalent in the monitoring and implementation of the national curriculum (CAPS) in non-fee-paying schools in rural areas. The lack of capacity to implement the curriculum in these schools (e.g. in a context of multigrade teaching, large classrooms and high turn-over of teachers and inability to access district support) combined with monitoring to enforce compliance leads to ‘malicious accountability’ and micromanagement. Here, teachers have to constantly submit ‘recovery plans’ to explain how they will catch up on missed teaching activities, reducing their time to prepare lessons, rushing through activities and leaving the majority of learners behind.

• The high distrust across the system prevents the various stakeholders to collaborate in working towards more effective accountability and creates inefficiencies across the system, such as when district subject advisors and district circuit managers operate in silos and only communicate through formal district reporting lines, resulting in duplication of reporting requirements for schools and officials sometimes visiting the school on the same day unknowingly.

2.2.3 OUTREACH AND CAPACITY-BUILDING

• International conference on Wonder, Education, and Human Flourishing (Hotel CASA, Amsterdam), 5-6 April: https://wonderfuleducation.eu/schedule/international-conference-on-wonder-education-and-human-flourishing/ (Schinkel)

• Workshops and invited talks about horizontal accountability and external inspection at the Department of Education, VOS-ABB, Toezichtfestival Inspectieraad, masterclass Zijistra-instituut (Van Montfort)

• News items (written news articles and radio interview) about freedom of education and Islamic schools in Het Parool, Dagblad van het Noorden, Radio 5, EO Live (Exalto)

• Workshop learning networks UN New York (Ehren)

• Keynote and panel contribution Research on Improvement of Systems of Education conference (RISE, Washington) (Ehren)

• Expert contribution to OECD Strategic Education Governance project (Ehren)
2.3 LEARNING SCIENCES

How can learning processes be optimised in various contexts? The research in Learning Sciences is aimed at facilitating educational improvements with scientific insights in collaboration with practice. Gaining insight into the learning processes at an individual and group level makes it possible to better equip the instructor with teaching methods and skills that promote the learning of the individual. The aim is to ensure that learning processes are optimised for each individual according to his or her characteristics, in line with the context. As such, we are interested in personalised education.

2.3.1 STAFF
Professor dr. Martijn Meeter (programme chair; m.meeter@vu.nl)
Professor dr. Maartje Rajmakers (programme chair; m.e.j.rajmakers@vu.nl)

Ewwe van den Berg
Tirza Bosma
Marion van Brederode
Ilja Cornelisz
Anne de la Croix
Jan Jurrien Dengerink
Sebastiaan Donszelmann
Caspar Geraedts
H.A. Glasbeek
S.L. Goei
Adam Handelzalts
Anna Kaal
Chris van Klaveren
Koen Willem Ottenhof
I. Pauw

Siema Ramdas
Andronski Sapountzi
J.A. van der Schee
Anja Swennen
Bregje de Vries
H.B. Westbroek

3 PhD students joined the programme in 2019:
- Erik Meij: teachers’ (conscious/unconscious) instructional beliefs and how these inform their instructional decision-making
- Tessa Slim: science and technology in primary education
- Elizabeth Wynberg: learning through object-oriented play

2.3.2 RESEARCH HIGHLIGHTS

<table>
<thead>
<tr>
<th>Project</th>
<th>PI, team and funder</th>
<th>Key questions and findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talking about books. The effect of dialogical conversations during book reading on the language and reading skills of children in kindergarten</td>
<td>Nicole van Amelvoort, Inouk Boerma, Denise Bontje, Rianne Hofma, Mireille Smits, Chiel van der Veen, Femke van der Wilt</td>
<td>The language and reading skills of young children form the foundation for further development. One way to stimulate this development is by interactive book reading. Interactive reading, however, is not easy. For example, how do you ask the right questions and how do you get students to reason about the story? In the current research project, the principles of dialogical conversations are implemented in book reading activities. It will be investigated what the effects are on the quality of the interaction during reading and the extent to which it contributes to the language and reading skills of children in kindergarten.</td>
</tr>
<tr>
<td>Educational equity and teacher discretion effects in high stake exams</td>
<td>Ilja Cornelisz, Martijn Meeter and Chris van Klaveren</td>
<td>Teacher judgements and scores on high-stakes exams often inform retention and graduation decisions. An evaluation of all exam 2007-2012 grades in the Netherlands, performed by Ilja Cornelisz, Martijn Meeter and Chris van Klaveren from ACLEA, suggests that 11% of all graduating students retake their exam due to teacher discretion. As a result, potential alterations to the grading procedure are now being considered by the Minister of Education. In a follow-up study, ACLEA will analyse whether these students benefit from teacher discretion in the long run and whether there might be differences between student subgroups, tracks and subjects. Read more about the project.</td>
</tr>
<tr>
<td>Achieving student agency in learner-centered (K-12) education</td>
<td>Nicoletta van Halem, Prof. Martijn Meeter</td>
<td>This study is part of the Research-Practice Partnership ‘Better Together’, an international research effort of ACLEA, UCSD, and K-12 schools in Southern California. The purpose of the partnership is to support informed decision making around innovation for learner-centered education. As a foundation for the development of instruments tapping into instructional practices, Nicoletta van Halem, Prof. Martijn Meeter, and colleagues conducted a literature review and built a theoretical model on achieving student agency in learner-centered (K-12) education. The study will be presented during the upcoming LEARN! Seminar.</td>
</tr>
<tr>
<td>NRO Educational Postdoc</td>
<td>Jo van Schaik, Maartje Rajmakers, NRO</td>
<td>This project aims to maximize kindergartners’ ability to transfer science concepts by improving conceptualization in an education-al setting. The combination of behavioral and neural measures provides insights into a fundamental learning mechanism while simultaneously supplying practitioners with an evidence-based model that offers guidelines for improving science content pedagogy at the start of children’s school careers. The research project has been resulting in several international research articles (under review and in preparation).</td>
</tr>
<tr>
<td>NRO review studies</td>
<td>Inge Zweers, Mariette Huizinga, Eddie Denessen (UL), Maartje Rajmakers, NRO</td>
<td>Inquiry-based Learning for students with Social-Emotional and Behavioral problems (SEB). The research consisted of an international literature review and a Dutch practical study. With this research we inventoried what is currently known about Investigative Learning for students with SEG. The results of our research is reported in an international research article (under review) and multiple Dutch publications for practice.</td>
</tr>
</tbody>
</table>

2.3.2 OUTREACH AND CAPACITY-BUILDING

• The 13th conference of the World Association of Lesson Study was held in Amsterdam in September 2019. LEARN! researchers co-organized the conference, chaired the conference and presented keynote talks.

• Marlieke van Kesteren: Blog 'Reactivate your prior knowledge!' How can we learn better and more efficiently? Does previously learned information (prior knowledge) effect how well we learn the new information? In her blog Marlieke van Kesteren presents her latest research. She and her research team investigated in whether active reactivation of previously learned information leads to better integration of old with new information. The paper is now published in Nature Science of Learning. Read the full blog here (in Dutch). Here’s a link to the full paper

• Chris van Klaveren, Ilja Cornelisz and Martijn Meeter start the House of Skills platform: House of Skills is a platform created for matching prospective employees with employers based on their skills, managed by the City of Amsterdam. Researchers from ACLA, a research center within LEARN! the Learning Sciences program, were central to developing the underlying theoretical framework, and implementing it in the form of an online platform.

2.4 MOTIVATION FOR LIFELONG LEARNING IN THE HEALTH PROFESSIONS

Developing “students for life”

How can we motivate students and adults to become lifelong learners, particularly in the health professions? Our group aims to understand how we can develop ‘students for life’ who are intrinsically motivated learners, who constantly interact with their environment, integrate learning and practice and want to invest in continuing professional development.

2.4.1 STAFF

Dr. Rashmi Kusurkar (programme chair; r.kusurkar@amsterdamumc.nl)
Dr. Anouk Wouters (postdoc)
Dr. Anne de la Croix (Assistant Professor)
Dr. Marianne Mak (Postdoc)
Dr. Ulviye Isik (postdoc)

PhD students:
Joyce Kors
Malou Stoffels
Jette Vreugdenhil
Jan Willem Grijpma

Two PhD students joined the programme in 2019:
• Lianne Mulder
• Lucille Malan – Joint PhD student with Sefako Magatho University, South Africa
## 2.4.2 RESEARCH HIGHLIGHTS

<table>
<thead>
<tr>
<th>Project</th>
<th>PI, team and funder</th>
<th>Key questions and findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unintended effects of selection on medical student and applicant diversity: What can we do about this?</td>
<td>Gerda Croiset, Rashmi Kusurkar, Anouk Wouters</td>
<td>The broad research question is, ‘How to select health professions education students so that they represent the demographic distribution in the Dutch population?’. This research aims to generate recommendations for selection processes for all applied science and healthcare education programmes and will be conducted over the period of 2019-2022.</td>
</tr>
<tr>
<td>How do undergraduate nursing students learn in the hospital setting?</td>
<td>Malou Stoffelis, Hester Daelmans, Saskia Peerdeman, Rashmi Kusurkar</td>
<td>Despite its relevance to nursing education, many gaps in our knowledge about clinical learning and terminology to describe it remain. Malou Stoffelis and colleagues conducted a scoping review to provide insight in conceptualisations and operationalisations of clinical learning in the literature, and to synthesise study outcomes in terms of learning activities. The small number of high quality studies hampered a comparison between concepts. The importance of autonomy, social learning, and the cognitive appraisal of learning was revealed. More research is needed on formal and informal components of learning and the interplay between behaviours and cognitions. Clarity about terminology and learning outcomes is warranted.</td>
</tr>
<tr>
<td>Preliminary findings on barriers, facilitators, and unequal opportunities in the admission and selection of medical students</td>
<td>Lianne Mulder, Anouk Wouters, Gerda Croiset, Rashmi Kusurkar</td>
<td>As part of her PhD, Lianne Mulder is interviewing high-school students preparing for selection to enter medical school. Her preliminary findings show that a major facilitator to prepare for selection is volunteer work. However, not everyone has equal opportunities to get a volunteer position. Out of the nine students whose parents work in the medical field, seven hold or held a volunteer position, whereas out of the nine students whose parents do not work in the medical field, only two had volunteering experience. Both groups saw the required high grades as their main barriers, nonetheless first-generation students mentioned socio-economic barriers such as study debt more often. Non-first-generation students named personal and psychological barriers. With her findings she emphasizes the inequality in preconditions of students applying for medical school.</td>
</tr>
<tr>
<td>Mistakes in medical education</td>
<td>Marianne Mak-van der Vossen</td>
<td>Making mistakes is part of a normal learning process. However, for supervisors this can be challenging and reacting in the “right” way is not easy. Marianne Mak-van der Vossen is a medical educator and coordinator of the theme “Professional behaviour” for the undergraduate medical program at VUMC School of Medical Sciences. In her blog she describes a three-step road map summarizing the results of 23 in-depth interviews with faculty responsible for remediation at various U.S. medical schools. Read the full blog here.</td>
</tr>
<tr>
<td>Buddies breaking barriers</td>
<td>Anouk Wouters, Rashmi Kusurkar, Christa Boer, Oussiel</td>
<td>Our research suggested that students from a low socio-economic background, who are first in their family to go to higher education and who have an ethnic minority background, experience more barriers when applying to selection for the medical study. Moreover, they lack role models in medical education and practice. In our Buddies Breaking Barriers project (La Comenius Teaching Fellow project), 17 bachelor students of Medicine from similar backgrounds act as role models and coach 27 high school students in their process of applying for the medical study, participating in the selection procedure, and also throughout the medical study. For this, the ‘buddies’ received training on selection, motivation, diversity, and coaching. With this project, we aim to empower these students and take away some of the perceived barriers. We will study the effects of the project and share experiences during a symposium in the next academic year. Read more about the project (in Dutch).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project</th>
<th>PI, team and funder</th>
<th>Key questions and findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small-group active learning: what do medical students want, and why? A Q-methodology study</td>
<td>Jan Willem Grijpma, Anne de la Croix, Martijn Meester, Rashmi Kusurkar</td>
<td>Small-group active learning methods are an important component of medical programs as they are an effective means to develop the knowledge, skills, and (personal and professional) attributes of students. However, teachers frequently experience resistance when engaging their students in learning activities, thus limiting their effectiveness. Jan Willem Grijpma and colleagues used in their study Q-methodology to gain more insight into students’ perspectives on small-group active learning, and identified reasons and solutions for (non-)engagement. Ultimately, they hope their findings will help to improve students’ motivation for, and engagement in, small-group active learning methods.</td>
</tr>
<tr>
<td>The reflective zombie: problematizing reflection in higher education</td>
<td>Anne de la Croix</td>
<td>‘The “reflective zombie” is someone who displays all the outer traits of reflection, without having actually reflected.’ In her blog, Anne de la Croix criticises the focus on assessment in the current education system in which even eager students can turn into reflective zombies as any deviation from the norm is often punished and receiving good grades are aligned with reflective thoughts fitting predefined characteristics. Read her full blog.</td>
</tr>
</tbody>
</table>
One of the flagship research projects of the group is:

**Burnout and engagement among PhD students in medicine**
Rashmi A Kusurkar, Stephanie van der Burg, Ulviye Isik, Marianne Mak-Van der Vossen, Anouk Wouters

Burnout is on the rise among medical students, residents, and physicians, but investigation of burnout among PhD students in medicine is lacking. Using the framework of Self-determination Theory of motivation, we investigated burnout and engagement in this group, and their association with motivation, work-life balance, and fulfillment or frustration of their basic psychological needs.

This prospective study was conducted among PhD students at our medical centre (n=990) through: a) an electronic survey on background characteristics, department, work setting, and validated burnout, engagement, motivation and basic psychological needs questionnaires, and b) qualitative description of the top three stressors and energizers in PhD work.

The response rate was 47%. We found three clusters/ groups of students on the basis of their scores on the burnout subscales: exhaustion, cynicism and negative perceived efficacy. Clusters 2 and 3 (35%) students had respectively moderate and high burnout scores, and were associated with low engagement scores. Cluster 3 (n=55, 12%), which had the highest scores on burnout, was associated with the lowest motivational, engagement, need satisfaction and work-life balance scores. We found a good fit for the “basic psychological needs frustration-burnout” model. The top stressors were high workload, obligations besides PhD work and poor guidance from supervisors. The top energizers were relatedness with colleagues, concrete achievements like publications and intrinsic motivation for the topic.

PhD students in medicine show a similar trend on burnout as medical students and residents. In order to bring out the best performance among PhD students, organizations should strive towards higher engagement rather than focusing only on preventing burnout.

**2.4.3 OUTREACH AND CAPACITY-BUILDING**
- Best Research Paper Prize at the Association of Medical Education in Europe Conference 2019 (Isik)
- Association of Medical Education in Europe Associate Fellowship (Wouters, Mak)
- Fellowship of the Karolinska Institute Prize for Research In Medical Education (Kusurkar)
- “How can you sustain motivation for your medical study?”, Keynote talk for 1st year medical students at HBT Medical College, Mumbai, India, as part of their foundation course in August 2019 (Kusurkar)
- Podcast interview about ‘The reflective zombie’ for the medical education podcast. January 2019. See: [https://soundcloud.com/user-67899269/aflevering-03](https://soundcloud.com/user-67899269/aflevering-03) (La Croix)
- “Workshop: The talkative student and the wallflower: how to cater for both extrovert and introvert students in the classroom’. With Reinoud de Jengh. Held at Erasmus MC and VU (La Croix)
- Fake news or research data? Using social media to capture public discourses. Keynote Science Exchange Day, Amsterdam, 2019 (Wouters)
- “Medical students’ learning preferences: A Q-methodology study”, Team Policy, Quality and Innovation Meeting, Amsterdam UMC – Location VUmc, [Grijpma]

**2.5 CHILD REARING**
The programme Child Rearing (program leaders Carlo Schuengel and Pol van Lier) was established over the course of 2019, and will be reported on in the Annual Report of 2020.
On 17 September 2019, LEARN! held its first annual conference. LEARN! researchers and affiliates presented highlights of their latest work on ‘Learning and the context in which people learn’. On the agenda were a number of interesting presentations spanning the broad domain of the educational, behavioural, and social sciences, ranging from personalized learning and motivation to trust, governance and inspections of schools. The conference was attended by almost 90 participants, both academic colleagues from the VU as practitioners from the Netherlands and abroad. Interviews with keynote presenters featured in short videos on our website: https://learn.vu.nl/nl/nieuws-agenda/nieuwsarchief/2019/jul-sep/learn-annual-conference-2019.aspx

3. OUTREACH AND CAPACITY-BUILDING

3.1 EVENTS AND SEMINARS IN 2019

<table>
<thead>
<tr>
<th>Date</th>
<th>Name Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 14</td>
<td>Research Meeting: Wilma Jongejan</td>
</tr>
<tr>
<td>June 11</td>
<td>Research Meeting: Gusta Tavecchio</td>
</tr>
<tr>
<td>July 10</td>
<td>Expertmeeting Philipp Abraham Kohnstamm (1875-1951)</td>
</tr>
<tr>
<td>September 17</td>
<td>LEARN! Annual Conference 2019</td>
</tr>
<tr>
<td>26-09-2019</td>
<td>Workshop and book launch philosophy of childhood (University of Salzburg)</td>
</tr>
<tr>
<td>October 10</td>
<td>Workshop Hoger Onderwijs Governance in Historisch Perspectief</td>
</tr>
<tr>
<td>29-10-2019</td>
<td>LEARN! Workshop “How to be successful in securing external funding for your research”</td>
</tr>
<tr>
<td>30-10-2019</td>
<td>Afscheidssymposium Bert van Oers: Sporen van vooruitgang - Reflectie op de bonte ontwikkeling van de Onderwijspedagogiek in Nederland</td>
</tr>
<tr>
<td>November 04</td>
<td>Science Transmission Meeting: Scientific Integrity and Publication Pressure</td>
</tr>
<tr>
<td>15-11-2019</td>
<td>Seminar and inaugural lecture Prof. dr. Melanie Ehren: Trust and Accountability to Improve Education Systems</td>
</tr>
<tr>
<td>December 02</td>
<td>Science Transmission Meeting: Twitter and Social Media</td>
</tr>
<tr>
<td>03-12-2019</td>
<td>Research meeting: Willeke Rietdijk</td>
</tr>
<tr>
<td>13-12-2019</td>
<td>Dratie Dr. Paula Sterkenburg</td>
</tr>
<tr>
<td>14-12-2019</td>
<td>Boekpresentatie Genot en Gebod</td>
</tr>
</tbody>
</table>
4. FACTS AND FIGURES

4.1 FUNDING 2019

- **Staff Costs (Director, Administrative Support):** €70,514.36
- **Seminars and Workshops:** €2,242.00
- **Catering Costs:** €7,576.92
- **Office Costs:** €95.25
- **Memberships:** €70,514.36
- **Total Costs:** €83,369.32
- **Total Contribution:** €114,000.00

4.2 RESEARCH OUTPUT

This only concerns the research output of VU Amsterdam. The research output of VUMC is not included in this.

<table>
<thead>
<tr>
<th>Year</th>
<th>Book</th>
<th>Refereed Article</th>
<th>Non-refereed Article</th>
<th>Book Chapter</th>
<th>PhD Thesis</th>
<th>Conference Paper</th>
<th>Professional Publication</th>
<th>Publications Aimed at the General Public</th>
<th>Other Research Output</th>
<th>Not Eligible (Mapped Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>3</td>
<td>111</td>
<td>10</td>
<td>17</td>
<td>51</td>
<td>43</td>
<td>17</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>10</td>
<td>124</td>
<td>2</td>
<td>35</td>
<td>32</td>
<td>53</td>
<td>26</td>
<td>49</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>5</td>
<td>94</td>
<td>4</td>
<td>5</td>
<td>43</td>
<td>6</td>
<td>25</td>
<td>203</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>4</td>
<td>107</td>
<td>10</td>
<td>29</td>
<td>6</td>
<td>32</td>
<td>5</td>
<td>229</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.3 RESEARCH STAFF

<table>
<thead>
<tr>
<th></th>
<th>2016 FTE</th>
<th>2016 Number</th>
<th>2017 FTE</th>
<th>2017 Number</th>
<th>2018 FTE</th>
<th>2018 Number</th>
<th>2019 FTE</th>
<th>2019 Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full professor</td>
<td>10.35</td>
<td>17</td>
<td>10.73</td>
<td>14</td>
<td>11.57</td>
<td>17</td>
<td>2.9</td>
<td>6</td>
</tr>
<tr>
<td>Associate professor</td>
<td>5.42</td>
<td>11</td>
<td>7.77</td>
<td>11</td>
<td>6.12</td>
<td>12</td>
<td>3.11</td>
<td>7</td>
</tr>
<tr>
<td>Assistant professor</td>
<td>15.11</td>
<td>30</td>
<td>11.82</td>
<td>28</td>
<td>16.14</td>
<td>31</td>
<td>7.94</td>
<td>17</td>
</tr>
<tr>
<td>Post docs</td>
<td>28.10</td>
<td>49</td>
<td>21.34</td>
<td>47</td>
<td>30.68</td>
<td>56</td>
<td>17.37</td>
<td>39</td>
</tr>
<tr>
<td>PhD employed</td>
<td>40.02</td>
<td>62</td>
<td>40.96</td>
<td>68</td>
<td>69.99</td>
<td>79</td>
<td>9.85</td>
<td>16</td>
</tr>
<tr>
<td>Total number of unique staff</td>
<td>99.00</td>
<td>169</td>
<td>92.62</td>
<td>168</td>
<td>114.5</td>
<td>195</td>
<td>40.97</td>
<td>85</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2016 FTE</th>
<th>2016 Number</th>
<th>2017 FTE</th>
<th>2017 Number</th>
<th>2018 FTE</th>
<th>2018 Number</th>
<th>2019 FTE</th>
<th>2019 Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support staff</td>
<td>0.5</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visiting fellows</td>
<td>3.00</td>
<td>9</td>
<td>2.6</td>
<td>6</td>
<td>3.22</td>
<td>9</td>
<td>1.57</td>
<td>6</td>
</tr>
<tr>
<td>Total number of unique staff</td>
<td>102.00</td>
<td>178.00</td>
<td>95.02</td>
<td>174.00</td>
<td>117.72</td>
<td>204.00</td>
<td>43.00</td>
<td>91.00</td>
</tr>
</tbody>
</table>

This only concerns the research staff of VU Amsterdam. The research staff of VUMC is not included in this.

4.4 LIST OF STAFF (WITH EMAIL) AND PUBLICATIONS

Sibel Altikutac, MSc
(s.altikutac@vu.nl)


Susanne Asscheman
(j.s.asscheman@vu.nl)


dr. Nienke van Atteveldt
(n.m.van.atteveldt@vu.nl)


prof. dr. Marian Bakermans
(m.bakermans@vu.nl)


**Pia Behnsen** (p.m2.behnsen@vu.nl)


**Pia Behnsen** (p.m2.behnsen@vu.nl)


**dr. Elsje van Bergen** (e.van.bergen@vu.nl)


Culturally similar and dissimilar


Dr. Martijn Meeter (m.meeter@vu.nl)

Anna van der Meulen


Dr. Maroesjka van Nieuwenhuijzen


dr. M. Oosterman (m.oosterman@vu.nl)


Temperament and Infant Motor Activity Observed During the Strange Situation Procedure. In SRCD

dr. Matthijs Overbeek (m.m.overbeek@vu.nl)

dr. Simone van der Pias (s.m.vander.pias@vu.nl)

dr. Maaike van Rest, MSc (m.van.rest@vu.nl)

Dr. Marjolein Rietveld-van Wingerden (m.rietveld-van.wingerden@vu.nl)

dr. Menno van der Schoot (m.vander.schoot@vu.nl)

prof. dr. C. Schuengel (c.schuengel@vu.nl)

Dr. Baukje Schippers (b.schippers@vu.nl)


42 ANNUAL REPORT LEARN! 2019

Marloes Schrijvers, MA

Dr. Joshua Snell


Dr. C.D.P. van Oeveren

Prof. dr. Jan Terwel

Dr. B.H. Westbroek

Dr. Marjolein Dobber


van der Wilt, F. M. (2019). Een open gesprek. JWS, 3 (1).


van der Wilt, F. [Author]. (2019). Hoe kan er formatief getoetst worden binnen programmagericht en ontwikkelingsgericht taalonderwijs?. Online publication or Website, NRO.

Dr. Rashmi Kusurkar


THE ABOVE REPORT IS PRODUCED USING THE FOLLOWING SETUP

Limited by: Associated organisational unit is one of LEARN! - Educational neuroscience, learning and development, LEARN! - Motivation for lifelong learning, LEARN! - Child rearing, LEARN! - Learning sciences, LEARN! - Educational governance, identity and diversity; Current publication status > Date: Selected range is between 1 Jan 2019 and 31 Dec 2019 (Calendar year)

Grouped on: Contributors > Organisations > Organisational unit; Contributors > Person

Ordered by: Author last name

DESIGN
Haagsblauw, Den Haag

PHOTOGRAPHY
Yvonne Compier
Caren Huygelen Fotografie
Peter Valckx
Unsplash

TEXT
Professor Dr. Melanie Ehren
Professor Dr. Nienke van Atteveldt
Professor Dr. Martijn Mieher
Dr. Rashmi Kusurkar

CONTACT
Secretariat Research Institute LEARN!
Faculty of Behavioural and Movement Sciences
MF building room MF-D435
Van der Boechorststraat 7
1081 BT Amsterdam
The Netherlands
T +31 20 598 89 01
E learn.fgb@vu.nl

© LEARN!, Vrije Universiteit Amsterdam
On 17 September 2019, LEARN! held its first annual conference. LEARN! researchers and affiliates presented highlights of their latest work on ‘Learning and the context in which people learn’. On the agenda were a number of interesting presentations spanning the broad domain of the educational, behavioural, and social sciences, ranging from personalized learning and motivation to trust, governance and inspections of schools. The conference was attended by almost 90 participants, both academic colleagues from the VU as practitioners from the Netherlands and abroad. Interviews with keynote presenters featured in short videos on our website: https://learn.vu.nl/nl/nieuws-agenda/nieuwsarchief/2019/jul-sep/learn-annual-conference-2019.aspx

### 3.1 EVENTS AND SEMINARS IN 2019

<table>
<thead>
<tr>
<th>Date</th>
<th>Name Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 14-05-2019</td>
<td>Research Meeting: Wilma Jongejan</td>
</tr>
<tr>
<td>June 11-06-2019</td>
<td>Research Meeting: Gusta Tavecchio</td>
</tr>
<tr>
<td>July 10-07-2019</td>
<td>Expertmeeting Philipp Abraham Kohnstamm (1875-1951)</td>
</tr>
<tr>
<td>September 17-09-2019</td>
<td>LEARN! Annual Conference 2019</td>
</tr>
<tr>
<td>26-09-2019</td>
<td>Workshop and book launch philosophy of childhood ([University of Salzburg])</td>
</tr>
<tr>
<td>October 10-10-2019</td>
<td>Workshop Hoger Onderwijs Governance in Historisch Perspectief</td>
</tr>
<tr>
<td>29-10-2019</td>
<td>LEARN! Workshop “How to be successful in securing external funding for your research”</td>
</tr>
<tr>
<td>30-10-2019</td>
<td>Afscheidssymposium Bert van Ders: Sporen van vooruitgang - Reflectie op de bonte ontwikkeling van de Onderwijspedagogiek in Nederland</td>
</tr>
<tr>
<td>November 04-11-2019</td>
<td>Science Transmission Meeting: Scientific Integrity and Publication Pressure</td>
</tr>
<tr>
<td>15-11-2019</td>
<td>Seminar and inaugural lecture Prof. dr. Melanie Ehren: Trust and Accountability to Improve Education Systems</td>
</tr>
<tr>
<td>December 02-12-2019</td>
<td>Science Transmission Meeting: Twitter and Social Media</td>
</tr>
<tr>
<td>03-12-2019</td>
<td>Research meeting: Wilkeke Riedtjik</td>
</tr>
<tr>
<td>13-12-2019</td>
<td>Oratie Dr. Paula Sterkenburg</td>
</tr>
<tr>
<td>14-12-2019</td>
<td>Boekpresentatie Genot en Gebod</td>
</tr>
</tbody>
</table>