With much joy we present to you LEARN’s 2018 annual report.

Already far in 2019, we still found it valuable to look back on 2018 and reflect on our vision, mission and activities to give us inspiration for this year and the years to come.

LEARN has made great progress in 2018. Our scientific success was reflected by 5 wonderful successfully defended PhD theses, over 80 publications including very relevant and practical handbooks, and solid funding so we can continue to do what we love doing: research on education in the health sciences throughout the graduate and postgraduate curricula, and physicians’ careers.

We have established three clear research themes and more collaboration within our community. The LEARN community expanded with new researchers from a diversity of backgrounds, both nationally and internationally. We welcome all new participants to the network, including our new PhD-students from all over the world.

Along with the growth in network size, we believe the community feel is more alive than ever, thanks to all the inspiring and fun people working within LEARN.

The annual LEARN symposium reflected the community feel with 110 participants actively attending, the workshops by our senior researchers, the ‘work-in-progress’ presentations by the PhD students, and the keynote lectures by our distinguished guests, professors Lorelei Lingard and Erik Driessen.

Besides research and scientific output we have focused on our societal relevance and the impact we can have on healthcare, through education and training. LEARN members took upon them many projects related to faculty development and curriculum innovations. The WEBSTER program (Wenckebach Simulation Center for Education & Research Training) saw the light with its great promise to advance quality and safety for UMCG and regional patients and employees. LEARN’s involvement in other faculty development initiatives in the northeastern educational region of the Netherlands continues to grow, allowing more and more clinical teachers in the UMCG and all its affiliated hospitals to profit from LEARN’s expertise.

And again, as in the past years, LEARN members were involved in many, many lectures and workshop all around the globe to teach and inspire others about health professions education and research.

We like to express our thanks to everyone who has contributed to LEARN and we look forward to be and work with you this year and the years to come.

Debbie Jaarsma & Paul Brand
**ABOUT LEARN**

The Lifelong Learning, Education & Assessment Research Network, commonly known as LEARN, is a research programme that participates in the research Institute School of Health Research (SHARE) and the Graduate School of Medical Sciences (GSMS) of the University Medical Center Groningen (UMCG). LEARN was founded in June 2016 as a result of the initiative of Professor Debbie Jaarsma. Under her leadership, LEARN is currently an established group with 2 program leaders (academic directors), 10 Principal Investigators, 31 (cross-appointed) senior researchers, 36 PhD-students who will graduate their doctoral program at the University of Groningen and 18 PhD-students who will graduate at different universities and are co-supervised by LEARN PI’s or senior researchers. LEARN established an extensive network of collaborating and visiting researchers at an institutional, national and international level. Some PI’s and senior researchers have their primary research appointment within LEARN and combine their research responsibilities with important educational, administrative or clinical responsibilities. Others have their primary appointment within the broader UMCG/University of Groningen or in the region.

**VISION**

To be a global, transformative leader in advancing healthcare education and practice through research. Our research in healthcare education informs practice and research in the practice of healthcare informs education.

**MISSION**

To impact on healthcare delivery through innovative and transformed healthcare education, clinical practice, and research. By solving real-world problems that are of concern to stakeholders such as educators, physicians, students, and patients alike.

**VALUES and QUALITIES**

- **Core values**: Engaged, Open, Creative, Empowering, Stimulating positive health and well-being
- **Core qualities**: Approachable, Collaborative, Practical, Personal, Humble

**LEARN WILL**

- Create new knowledge through research and informed innovation relevant to advancing healthcare education and practice.
- Foster translation of new knowledge by promoting creative synergy between diverse theoretical perspectives, and between theory and practice.
- Build scholarly capacity through faculty development and mentorship activities to cultivate future research leaders in healthcare education and practice.
- Foster a culture of collaboration, academic thinking and freedom.
The scope of LEARN’s research ranges from the processes of admission into a health professions programme to the development and maintenance of competence and continuing professional development and identity processes engaged throughout a professional’s career. LEARN’s research programme focuses on three main themes that are closely aligned with developments within the undergraduate and postgraduate health professions curricula and with the vision and mission of continuing professional (faculty) development in the UMCG and its region. Learn more about them:

### Non-Technical Competency Development and the Relation to Competency Based Education and Workplace-Based Learning

The first research theme focuses on the development of non-technical (‘generic’) competencies and the role of the socio-cultural environment. The CanMEDS Framework identifies that, in addition to medical expertise, excellent doctors are expected to acquire competencies in six other, non-technical domains: communication, collaboration, leadership, health advocacy, scholarship and professionalism. Non-technical competencies play a crucial role in healthcare workers’ performance and long-term career success. The emphasis in this theme is on interactions between the individual, the health care team and social and contextual factors related to the working and learning environment. A better understanding of the complex interplay of these factors contributes to improved quality and safety of health care and its education. Current research topics are (interprofessional and intercultural) communication, collaboration, compassion, shared-decision making, patient-centeredness, health advocacy, critical reflective behavior, self-regulation & self-direction, lifelong learning abilities, (personal) leadership and a well-developed professional identity. This theme is placed in the context of current movements of competency-based education in undergraduate, postgraduate and continuous education, and faculty development programmes.

### Motivation, well-being and performance of (future) healthcare workers/adaptation to and prevention of stress

The second theme focuses on psychological and socio-cultural factors influencing motivation and well-being of (future) healthcare professionals. The emphasis is on interactions between the individual and the socio-cultural study and working environment, and the relation between motivation, well-being and performance. A better understanding of this complex interplay may help prevent unhealthy stress and improve healthy behavior and performance of (future) healthcare workers and therefore contribute to improved quality and safety of health care and health professions education. Current research topics are stressors and resources, and motivational and health erosion processes in relation to students’, teachers’ and health care workers’ performance within their social environment. Results may be used to redesign and develop interventions to promote wellbeing at the individual, department and hospital level. Within SHARE, this theme has emerged logically from the research programmes Health Psychology Research (HPR), Ethical, Legal, and Social Issues in Genetics (ELSI) and LEARN.

### Innovative and transformed educational design and the complexities of curriculum change

The third research theme comprises innovative and transformative educational design and the challenges associated with translating and implementing these designs in practice through complex change processes. Changing education is a recurring and complex process involving many stakeholders with conflicting views. A better understanding of the role of governance, challenges and strategies involved in change processes and potential discrepancies between the design, the curriculum in action and the learned curriculum may enhance meaningful curriculum change (processes) and empower leaders and stakeholders involved. Research focuses on learning processes, learning outcomes, curriculum development, course implementation and evaluation. This includes initiatives such as serious games, simulations, EBM-training, social media, e-portfolio, assessment instruments, learning communities, learning in the operating theatre and extracurricular honours programmes.
The LEARN team is a multidisciplinary group of researchers in composition which includes (medical) educationalists, medical specialists, nurses, social scientists (psychology, sociology, business and economics), linguists, basic and applied health scientists, teachers and students. Professionals of different departments and faculties participate in the team to collaborate across areas. Both the total program and the team members maintain close links with the educational organizations within the UMCG and the affiliated teaching hospitals. Besides, links are established and maintained with health care practices (departments, care trajectories) within the UMCG.
The LEARN Team

**PhD Students**

**Anne van Gaalen**
- Title: Gamification of basic sciences education for the health professions
- Expected completion: 2020
- Supervisor: prof. Debbie Jaarsma
- Co-supervisor: dr. Janniko Georgiadis

**Adriaan van Doorn**
- Title: "P-scribe" as exploring pharmacotherapy eLearning web application and research instrument
- Expected completion: 2021
- Supervisor: prof. Gerda Croiset and prof. Rob Henning
- Co-supervisor: dr. Ben Janssen

**Derek Kuipers**
- Title: Design for transfer
- Expected completion: 2019
- Supervisor: prof. Jean-Pierre Pierie
- Co-supervisor: dr. Jelle Prins

**Diego Lima Ribeiro**
- Title: Moral dilemmas, emotional competence and professional identity development of medical students
- Expected completion: 2023
- Supervisors: dr. Marco Carvalho, dr. Esther Helmich and prof. Debbie Jaarsma

**Etico Draaisma**
- Title: Learning Evidence-based Medicine
- Expected completion: 2021
- Supervisors: prof. Paul Brand and prof. Debbie Jaarsma
- Co-supervisor: dr. Jolita Bekhof

**Ellen Driever**
- Title: Shared decision making: its role in medical education
- Expected completion: 2021
- Supervisor: prof. Paul Brand and prof. Anne Stiggelbout

**Elvira Coffetti**
- Title: Nursing and the adoption of technology
- Expected completion: 2023
- Supervisor: prof. Petrie Roodbol
- Co-supervisor: dr. Wolter Paans and dr. Jelly Zuidersma

**Eelco Draaisma**
- Title: Learning Evidence-based Medicine
- Expected completion: 2021
- Supervisors: prof. Paul Brand and prof. Debbie Jaarsma
- Co-supervisor: dr. Jolita Bekhof

**Ellen Driever**
- Title: Shared decision making: its role in medical education
- Expected completion: 2021
- Supervisor: prof. Paul Brand and prof. Anne Stiggelbout

**Elvira Coffetti**
- Title: Nursing and the adoption of technology
- Expected completion: 2023
- Supervisor: prof. Petrie Roodbol
- Co-supervisor: dr. Wolter Paans and dr. Jelly Zuidersma

**Gerbrich Galema**
- Title: The transition from undergraduate to postgraduate medical education from an organizational socialization perspective
- Expected completion: 2023
- Supervisors: prof. Götzi Wietasch and prof. Debbie Jaarsma
- Co-supervisor: dr. Jan Pols

**Floor Velthuis**
- Title: Unraveling the complexities of enacting change in undergraduate medical curricula
- Expected completion: 2019
- Supervisor: prof. Debbie Jaarsma
- Co-supervisors: dr. Esther Helmich and dr. Hanke Dekker

**Fundhy Prihatanto**
- Title: Students' self-directed learning development in the Indonesian context
- Expected completion: 2020
- Supervisors: prof. Janke Cohen-Schotanus and prof. Debbie Jaarsma
- Co-supervisors: dr. Hanke Dekker and dr. Esther Helmich

**Eliot Dijkstra**
- Title: Preparing preparedness for practice after postgraduate medical education
- Expected completion: 2019
- Supervisors: prof. Paul Brand and prof. Debbie Jaarsma
- Co-supervisor: dr. Jan Pols
<table>
<thead>
<tr>
<th>PhD Students</th>
<th>Title</th>
<th>Expected Completion</th>
<th>Supervisors</th>
<th>Co-supervisors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jolise 't Mannetje</td>
<td>'Personal resources in honours students'</td>
<td>2020</td>
<td>prof. Debbie Jaarsma</td>
<td>Dr. Marjolein Heijne-Penninga, Dr. Marca Wolfensberger, and Dr. Irene Vischer-Voerman</td>
</tr>
<tr>
<td>Kiki Spanjers</td>
<td>'Serious Games and eHealth'</td>
<td>2020</td>
<td>prof. Sophia de Rooij and prof. Debbie Jaarsma</td>
<td>Dr. Harmanne Hegge</td>
</tr>
<tr>
<td>Laura Smids</td>
<td>'Honours students: preferences for autonomy and structure'</td>
<td>2020</td>
<td>prof. Debbie Jaarsma</td>
<td>Dr. Johanna Schönrock-Adema and Dr. Joke van der Wouden</td>
</tr>
<tr>
<td>Liesbeth Kool</td>
<td>'The wellbeing of newly qualified midwives'</td>
<td>2022</td>
<td>prof. Debbie Jaarsma and prof. François Scheitlievis</td>
<td>Dr. Esther Feijten</td>
</tr>
<tr>
<td>Luppo Kuilman</td>
<td>'Ethical decision making among physician assistants'</td>
<td>2020</td>
<td>prof. Petrie Roodbol and prof. Frank Hendriks</td>
<td>Dr. Gerard Jansen and Dr. Berry Middel</td>
</tr>
<tr>
<td>Martha van der Wal</td>
<td>'Leadership in residency training'</td>
<td>2020</td>
<td>prof. Janke Cohen-Schotanus, prof. Fedde Scheele, and prof. Debbie Jaarsma</td>
<td>Dr. Johanna Schönrock-Adema</td>
</tr>
<tr>
<td>Mariëlle Adema</td>
<td>'Professional identity formation of clinical clerkship students'</td>
<td>2020</td>
<td>prof. Debbie Jaarsma, prof. Diana Dolmans, and prof. Fedde Scheele</td>
<td>Dr. Esther Helmich</td>
</tr>
<tr>
<td>Mirjam Kaijser</td>
<td>'Learning and teaching in bariatric surgery'</td>
<td>2020</td>
<td>prof. Jean-Pierre Pierle</td>
<td>Dr. Bart van Wagensveld and Dr. Gabrielle van Ramshorst</td>
</tr>
<tr>
<td>Nico Leenstra</td>
<td>'Team interactions in trauma and critical care'</td>
<td>2020</td>
<td>prof. Jaap Tulleken and prof. Debbie Jaarsma</td>
<td>Dr. Oliver Jung</td>
</tr>
<tr>
<td>The LEARN Team</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PhD Students</td>
<td>Title</td>
<td>Expected Completion</td>
<td>Supervisors</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>----------------------------------------------------------------------</td>
<td>---------------------</td>
<td>----------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Rodrigo G Alvarez</td>
<td>‘Burnout in medical students and Its treatment’</td>
<td>2022</td>
<td>prof. Adelita Ranchor and prof. Debbie Jaarsma</td>
<td></td>
</tr>
<tr>
<td>Tamara Köhler</td>
<td>‘Development and socialization of the pharmacy technician’</td>
<td>2020</td>
<td>prof. Debbie Jaarsma, dr. Michiel Westerman</td>
<td></td>
</tr>
<tr>
<td>Patrick Nieboer</td>
<td>‘Task complexity and operation theatre dynamics between surgeons and assistants/supervisors’</td>
<td>2020</td>
<td>prof. Debbie Jaarsma and prof. Sjoerd Bulstra, dr. Mike Huiskes and dr. Martin Stevens</td>
<td></td>
</tr>
</tbody>
</table>
### PhD Students (co-supervised by LEARN researchers)

<table>
<thead>
<tr>
<th>Name</th>
<th>Nationality</th>
<th>Project Title</th>
<th>Expected Completion</th>
<th>Supervisors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daniel Franci</td>
<td>Erasmus MC</td>
<td>&quot;The Influence of Point of Care Ultrasound on the clinical reasoning of medical students&quot;</td>
<td>2023</td>
<td>dr. Marco Carvalho, prof. Henk Schmidt and dr. Silvia Mamede</td>
</tr>
<tr>
<td>Marianne van der Vossen</td>
<td>VUMC</td>
<td>&quot;Learning from lapses: How to identify, classify and respond to unprofessional behaviour in medical students.&quot;</td>
<td>2019</td>
<td>prof. Gerda Croiset, prof. Walter van Moek, dr. Rashmi Kusurkar</td>
</tr>
</tbody>
</table>

---

- **Marianne van der Vossen (VUMC)**
  - "Factors and mechanisms that influence a medical specialist’s motivation for lifelong learning"
  - Expected completion: 2019
  - Supervisor: prof. Gerda Croiset

- **Tamara van Woekiz (RadboudMC)**
  - "Making self-directed learning work"
  - Expected completion: 2020

- **Nelleke Poel (VUMC)**
  - "Factors and mechanisms that influence a medical specialist’s motivation for lifelong learning"
  - Expected completion: 2019
  - Supervisor: prof. Gerda Croiset
  - Co-supervisors: dr. Rashmi Kusurkar and dr. Anouk Wouters
PhD Students (co-supervised by LEARN researchers)

**International**

**Evangeline Stubbing (UK)**
- University of Aberdeen, Scotland
- ‘An exploration of feelings experienced as medical students’ negotiate the development of a professional identity’
- Expected completion: 2020
- Supervisors: Prof. Jennifer Cleland and dr. Esther Helmich

**Gabriela Victorelli (BR)**
- University of Campinas
- ‘Using game to teach first aids to secondary students’
- Expected completion: 2021
- Supervisors: dr. Marco Carvalho

**Guilherme Gryschek (BR)**
- University of Campinas
- ‘The impact of clinical rotations on self-efficacy in palliative care and thanatophobia of medical students’
- Expected completion: 2019
- Supervisors: dr. Marco Carvalho

**Heloisa Takasu Pontes (BR)**
- University of Campinas
- ‘End-of-life, emotions and professional identity development of medical students’
- Expected completion: 2023
- Supervisors: dr. Marco Carvalho, prof. Debbie Jaarsma and dr. Esther Helmich

**Nat Sarant (DE)**
- Bremen University
- ‘Emotional game play design in anatomy learning’
- Expected completion: 2022
- Supervisors: prof. Rainer Malaka and dr. Janniko Georgiadis

**Rafael Lustosa Ribeiro (BR)**
- University of Campinas
- ‘Social Media, gamification and medical students’ engagement’
- Expected completion: 2022
- Supervisors: dr. Marco Carvalho

**Tiago de Araújo Guerra Grangeia (BR)**
- University of Campinas
- ‘Learn+Fun! Social Media and Gamification sum up to foster a community of practice during an Emergency Medicine Rotation’
- Expected completion: 2019
- Supervisors: dr. Marco Carvalho
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Thesis Title</th>
<th>Supervisors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dineke Hylkema</td>
<td>Master Communication and Information Sciences</td>
<td>‘Experiences of interns with their position in the medical hierarchy’</td>
<td>dr. M.N. Gosen (CIW) and dr. Jan Pols (UMCG)</td>
</tr>
<tr>
<td></td>
<td>RUG</td>
<td>‘The representation of frontstage and backstage in Facebook posts of interns’</td>
<td>dr. G. Weitkamp (Spatial Sciences) and dr. Jan Pols (UMCG)</td>
</tr>
<tr>
<td>Dorinda van der Veen</td>
<td>Research master Spatial Sciences</td>
<td>‘Covert insights: a content analysis of Facebook posts of interns’</td>
<td>prof. Jo van Engelen, dr. Johanna Schönrock-Adema and dr. Joke van der Mark-Wouden</td>
</tr>
<tr>
<td>Daindra Utami</td>
<td>Faculty of Economics and Business RUG</td>
<td>‘Creating Physician-Scientists: A Study on Motivations in doing Elective Scientific Research Activities Using TPF and Goal Importance’</td>
<td>dr. M.N. Gosen (CIW) and dr. Jan Pols (UMCG)</td>
</tr>
<tr>
<td>Maria Beatriz Dias</td>
<td>Faculty of Medical Sciences – UNICAMP (BR)</td>
<td>‘Inclusion is not enough: professional identity development of low-income medical students’</td>
<td>dr. Marco Carvalho and dr. Esther Helmich</td>
</tr>
<tr>
<td>Jan Liewig</td>
<td>Medicine - Universität Oldenburg</td>
<td>‘How the coaches strive for a conductive learning environment in small reflective groups?’</td>
<td>dr. Hanke Dekker and dr. Johanna Schönrock-Adema</td>
</tr>
<tr>
<td>Fabian Vogelpohl</td>
<td>Faculty of Medical Sciences - UMCG</td>
<td>‘Qualitative evaluation of an intervention to improve the educational environment in medical research projects’</td>
<td>dr. Johanna Schönrock-Adema, dr. Joke van der Mark-Wouden</td>
</tr>
<tr>
<td>Brenda Sariowan</td>
<td>Master Communication and Information Sciences</td>
<td>‘Covert insights: a content analysis of Facebook posts of interns’</td>
<td>dr. M.N. Gosen (CIW) and dr. Jan Pols (UMCG)</td>
</tr>
<tr>
<td>Irena Middeljans</td>
<td>Master Communication and Dentistry - UMCG</td>
<td>‘The gamer in me: towards a game-based taxonomy of biomedical students’</td>
<td>dr. Janniko Georgiadis, Anne van Gaalen</td>
</tr>
<tr>
<td>Irena Middeljans</td>
<td>Administrative Support</td>
<td></td>
<td>Tineke Bouwkamp-Timmer</td>
</tr>
<tr>
<td>Sofie van der Mei</td>
<td>Administrative Support</td>
<td></td>
<td>Sofie van der Mei</td>
</tr>
</tbody>
</table>
Context matters when striving to promote active and lifelong learning in medical education
Berkhout, J. J., Helmich, E., Teunissen, P. W., van der Vleuten, C. P. M. & Jaarsma, A. D. C., Medical Education. 52, 1, p. 34-44. https://doi.org/10.1111/medu.13463

Physicians' self-assessed empathy levels do not correlate with patients' assessments

"You put up a certain attitude": a 6-year qualitative study of emotional socialisation
Boilier, M., Doulougeri, K., de Vries, J. & Helmich, E., Medical Education. 52, 10, p. 1041-1051. https://doi.org/10.1111/medu.13650

Simulation centers and pedagogical planning: two sides of the same coin

Importância e desafios do treinamento simulado em saúde

Measuring change in nurses' perceptions about family nursing competency following a 6-day educational intervention

Emergent achievement segregation in Freshmen Learning Community networks

Debriefing as an opportunity to develop emotional competence in health profession students: Faculty, be prepared!

The impact of curriculum design in the acquisition of knowledge of oncology: Comparison among four medical schools

Comparison of the level of cognitive processing between case-based items and non-case-based items on the Interuniversity Progress Test of Medicine in the Netherlands

Avoiding surgical skill decay: A systematic review on the spacing of training sessions

Additional simulation training: does it affect students’ knowledge acquisition and retention?

Do different curriculum aligned selection procedures admit students with different personality profiles to medical school?

The effects of a non-cognitive versus cognitive admission procedure within cohorts in one medical school

Implementing evidence-based medicine in a busy general hospital department: results and critical success factors
Learn + Fun! Social media and gamification sum up to foster a community of practice during an emergency medicine rotation

"Oh my God, I can’t handle this!": trainees’ emotional responses to complex situations

How to ... choose between different types of data

The importance of contextual, relational and cognitive factors for novice nurses’ emotional state and affective commitment to the profession. A multilevel study

Using cognitive agents to train negotiation skills
Stevens, C. A., & Antol, J. M., Health Professions Education. https://doi.org/10.1016/j.hpe.2018.11.003

The role of study strategy in motivation and academic performance of ethnic minority and majority students

A roadmap for attending to medical students’ professionalism lapses.

Developing a two-dimensional model of unprofessional behaviour profiles in medical students

From aggregation to interpretation: how assessors judge complex data in a competency-based portfolio

Simulated medical consultations with standardized patients: In-depth debriefing based on dealing with emotions

“Speed up!” The influences of the hidden curriculum on the professional identity development of medical students

Perceived usefulness of the International Classification of Functioning, Disability and Health (ICF) increases after a short training: A randomized controlled trial in master of advanced nursing practice students

Clinical workplace learning: perceived learning value of individual and group feedback in a collectivistic culture

The voice of nurses: novice nurses’ first experiences in a clinical setting. A longitudinal diary study

The satisfaction regarding handovers between ambulance and emergency department nurses: an observational study
Current techniques of teaching and learning in bariatric surgical procedures: A systematic review

Developing a competency framework for pharmacy technicians: Perspectives from the field

Internists’ dilemmas in their interactions with chronically ill patients: A comparison of their interaction strategies and dilemmas in two different medical contexts

Moral reasoning explained by personality traits and moral disengagement: a study among Dutch Nurse Practitioners and Physician Assistants

Reforms in vumc school of medical sciences amsterdam: Student engagement, a minor elective semester and stakeholder collaboration in improving the quality of assessments

Efforts, rewards and professional autonomy determine residents’ experienced well-being

Challenges for conducting and teaching handovers as collaborative conversations: an interview study at teaching ICUs

Simulated patient’s perspective on speaking up about unprofessional behaviour: “Training the ‘responding muscles’ is key!”
Mak-van Der Vossen, M., Van Mook, W., Croiset, G. & Kusurkar, R., Quality in Primary Care. 26, 1, p. 23-26.

Investigating US medical students’ motivation to respond to lapses in professionalism

The impact of massed and spaced-out curriculum in oncology knowledge acquisition

Assessment programs to enhance learning

Taking qualitative research to the next level

Workplace mentoring of residents in generic competencies by an independent coach

Selection as a learning experience: an exploratory study

Resident burnout: evaluating the role of the learning environment

‘Self-assessment of empathy by physicians and medical students does not correlate with patients ‘assessments’
Bernardo M, Carvalho-Filho, M. A., PhD these defended at University of Campinas-BR
A longitudinal approach to changes in the motivation of Dutch pharmacists in the current continuing education system

How basic psychological needs and motivation affect vitality and lifelong learning adaptability of pharmacists: a structural equation model

Faculty’s work engagement in patient care: impact on job crafting of the teacher tasks

Motivational profiles and motivation for lifelong learning of medical specialists

Factors influencing academic motivation of ethnic minority students: A Review

Intended learning and learning in action: Understanding how a competency framework for international business is construed by students

Self-regulated learning in the clinical context: A systematic review

A systematic review of factors related to first-year students’ success in Dutch and Flemish higher education

Changes in perceived supervision quality after introduction of competency-based orthopedic residency training: A national 6-year follow-up study

The learning environment and resident burnout: a national study

Cumulative assessment: Does it improve students’ knowledge acquisition and retention?

Students’ motivation for interprofessional collaboration after their experience on an IPE ward: A qualitative analysis framed by self-determination theory

Postgraduate nurses’ self-assessment of clinical competence and need for further training. A European cross-sectional survey

Teachers’ open invitations in whole-class discussions
Selection and lottery in medical school admissions: who gains and who loses?
https://doi.org/10.15694/mep.2018.0000271.1

Authoring the identity of learner before doctor in the figured world of medical school
https://doi.org/10.1007/s40037-017-0399-0

Turning the simulation session upside down: the supervisor plays the resident

Importance and challenges of simulation training in healthcare

Advice for authors from the editors of Perspectives on Medical Education: Getting your research published

Journal Club Challenge: enhancing student participation through gamification
Carvalho-Filho, M. A., Santos, T. M., Orahata, T. M. & Cecilio-Fernandes, D., Medical Education. 52, 5, p. 551. https://doi.org/10.1111/medu.13552

Context, culture and beyond: Medical oaths in a globalising world
Helmich, E. & de Carvalho-Filho, M. A., Medical Education. 52, 8, p. 784-786. https://doi.org/10.1111/medu.13623

Direct observation in postgraduate training: making it happen and making it work
Renting, N., Medical Education. 52, 12, p. 1218-1220. https://doi.org/10.1111/medu.13755
Leergemeenschappen en de vorming van hulp- en vriendschapsrelaties van eerstejaarsstudenten in het hoger onderwijs

Dissectie van leren en lesgeven in de operatiekamer

De autonomie-ondersteunende doceerstijl in excellentieprogramma’s: de invloed van mindset, motivatie en druk vanuit de sociale werkomgeving

Behoefte aan uniforme kwaliteitscyclus van coschappen

Toegepaste Conversatieanalyse
Noordegraaf, M., Schep, E. & Koole, T., Kwalon. 23, 2, p. 6-15.

Professionele identiteitsontwikkeling van studenten en verpleegkundigen

Weerbaar opleiden: Over passie, autonomie en het verleggen van grenzen
EDUCATING DOCTORS FOR THE FUTURE
Evaluation of undergraduate medical education in Finland.

A COGNITIVE NEUROSCIENCE PERSPECTIVE ON SKILL ACQUISITION IN CATHETER-BASED INTERVENTIONS

LONGITUDINAL PEER NETWORK DATA IN HIGHER EDUCATION

KLINISCH ONDERWIJS EN OPLEIDEN IN DE PRAKTIJK
Boendemaker, P. M., Brand, P. & Venekamp, R., 4 ed. Prelum Uitgevers.

MEDISCHE SPOEDSITUATIES: DE SYSTEMATISCHE BENADERING
Once a year, a Lifelong Learning, Education & Assessment Research Network (LEARN) symposium is organized where the entire group of PI’s, senior researchers, PhD students and collaborating researchers meet to share ideas and to engage in constructive controversy to stimulate creativity and innovation.

On 26 January 2018, the second LEARN symposium took place in the UMCG Education Center. The goal of the symposium was twofold. First, to present our research work to a broader audience. Second, to create a platform to share knowledge, expertise, experience, research findings, experiences with evidence-based education and to learn from each other. We invited all interested in medical and health professions education to participate. This symposium represented the collaboration of all teaching hospitals involved in postgraduate education in our region (OOR-NO). To celebrate this participation, the joint directors of the teaching hospitals endorsed an annual lecture by an international keynote speaker at this symposium. We were honored to welcome the keynote speakers: prof. Erik Driessen from Maastricht University and prof. Lorelei Lingard from the Western University, Ontario Canada, whose lecture bears the name of professor Rein Zwierstra, the first dean of Medical and Postgraduate Education at the UMCG. All workshops were hands-on and interactive. The LEARN members presented their research through quick and short communications to discuss research that is still in progress and completed studies.

Workshops

- dr. Esther Helmich & prof. Lorelei Lingard: “How would you call this in English?” Being reflective about translations in (international) qualitative research.
- dr. Andrea de Winter & dr. Mike Huiskes: Designing a Health Literacy Communication program for medical students.
LEARN regularly organises 3-hour educational seminars on a broad range of topics related to the research themes and beyond. The rounds are open for all interested in (evidence-based) education (in the UMCG and the affiliated hospitals) to attend.

Twice a year, all PI’s and senior researchers gather for a half-day meeting, chaired by the programme leaders, in order to review research progress, anticipate submitting collaborative grant applications and network.

Every month, subgroups of LEARN organize research meetings in which PhD students and their supervisors discuss their work and relevant topics in the field of interest.

**Educational Seminars**

- **dr. Pim Teunissen** (Professor Work-based learning in Healthcare at the School of Health Professions Education (SHE)- Maastricht University)
  Supporting students through transition, what are we aiming for?

- **dr. Helga Raghoebart-Krieger & dr. Silvia Mamede** (Erasmus MC Rotterdam)
  Waarom heb ik daar niet aan gedacht!? Hoe komt het dat huisartsen fouten maken in hun diagnostisch redeneren en wat kunnen ze doen om fouten te voorkomen?

- **dr. Esther Helmich & dr. Sayra Cristancho** (Western University, London Ontario, Canada)
  Untangling workplace clinical challenges and implications for medical education
## Other Events

### (Invited) lectures, workshops given by LEARN-ers

**prof. Debbie Jaarsma**
- ‘Self-regulated learning at the clinical workplace’. Keynote lecture at the Danish Society Medical Education, Aarhus
- ‘De Veterinair draait door’. Discussion leader round table session at annual KNMvD conference
- ‘Motivation and self-regulation of medical students’, Keynote lecture at Airlangga University Surabaya
- ‘Unravelling the complexities of major curriculum change’ workshop for deans of East Indonesia medical schools, Surabaya; 3 keynote lectures at Gadjah Mada University, Yogyakarta; VetEd conference, Utrecht and at PJ Safarik University Košice
- (Work-)engagement of PhD-students, workshop at Pronkewail consortium, UMCG
- ‘The art of getting published in medical education’, pre-conference workshop NVMO promovendendag

**prof. Debbie Jaarsma & Tamara Köhler**
- Organizing team of the Rogano Meeting at Basel, Switzerland
- ‘How to manage your supervising team?’, workshop at ROGANO meeting

**prof. Debbie Jaarsma & dr. Marco Carvalho**
- Assessment in the Emergency Department. EBMA 2018 - workshop at Annual European Conference on Assessment in Medical Education, Braga

**prof. Debbie Jaarsma & dr. Jelle Prins**
- Preconference workshop NVMO; intervention on wellbeing of (future) healthcare professionals

**prof. Paul Brand**
- Chair of the NFU-werkconferentie
- ‘Communicatie in de spreekkamer’, speaker in the NAPA Congres PA-INVEST;
- ‘Praten en luisteren in de spreekkamer?’, speaker in the congres: De meest gestelde vragen aan de Kinder-MLD arts by European Postgraduate Gastro-surgical School (EPGS)
- ‘Een loopbaan lang leren’, speaker in the workshop - Presteren onder druk: Inzichten uit wetenschap en praktijk
- ‘De patiënt centraal door samen beslissen’ Invited speaker
- ‘Blik op docentprofessionalising’ speaker in the ‘Kijken in de ziel van onderwijs en opleiden in het UMCG’ Symposium
- ‘SNAPPS out of it: no time to supervise the junior doctor’, speaker
- ‘SNAPPS: combining patient care and clinical education when supervising a junior doctor’, speaker
- Fringe sessie “The Wildwest show of EBM teaching”; speaker
- ‘Samenwerken in de spreekkamer maakt artsenwerk leker en effectiever’, speaker

**prof. Petrie Roodbol**
- ‘The maturation of the Dutch Nurse Practitioners’ speaker in the 10th International Conference for Nurse Practitioner / Advanced Practice Nursing
- Organizing team of the 10th International Conference for Nurse Practitioner / Advanced Practice Nursing

**prof. Petrie Roodbol & prof. Rijk Gans**
- Collaboration of physicians, nurses and nurse practitioners; blind dates? Speakers in the 10th International Conference for Nurse Practitioner / Advanced Practice Nursing
Other Events

(Invited) lectures, workshops given by LEARN-ers

**dr. Jasperina Brouwer**
- Symposium of European Association for Research on Learning and Instruction (EARLI) Conference - Sig4
- ‘Exploration of social and academic integration and belongingness in student-centered learning’, speaker at the European Association for Research on Learning and Instruction (EARLI) Conference - Sig4
- ‘Learning Communities: what influences knowledge sharing?’ speaker at the European Association for Research on Learning and Instruction (EARLI) Conference - Sig4
- "Small group teaching: Beneficial for all?" Guest presentation in the International Presidential Visiting Scholar Fellowship
- Onderwijs Research Dagen, Invited speaker
- ‘Unravelling the ontological and epistemological complexity weaved in learning community studies’ speaker at the European Association for Research on Learning and Instruction (EARLI) Conference - Sig14 & 25
- ‘Introduction to (Mixed Method) Social Network Analysis’ and ‘Using mixed methods designs to investigate the effects of educational interventions’ speaker at the Mixed Methods International Research Association (MMIRA) International Conference

**prof. Jaap Tulleken**
- Invited workshop leader leiderschapsontwikkeling, story telling. Utrecht, NVMO landelijke promovendi dag
- Invited workshop leader: Omgaan met fouten: medische zorg in vergelijking met het onderwijs. Drents Museum, Bureau Meesterschap Assen
- Invited speaker: Minisymposium: Protocollair werken en omgaan met fouten van medische missers: Autoriteit Financiële Markten en management/auditors hoofdkantoor RABO Utrecht

**dr. Marco Carvalho**
- Southgate Lecture - Assessment and beyond: creating a meaningful clinical rotation, Keynote lecture at EBMA - Annual European Conference on Assessment in Medical Education, Braga
- Equity in the global health sciences education community: leveling the playing fields? Symposium AMEE, Basel
- Debriefing Technique, EBMA 2018 - workshop at Annual European Conference on Assessment in Medical Education, Braga

**dr. Marco Carvalho & dr. Esther Helmich**
- Using Rich Pictures to Build Resilience and Develop a Professional Identity, workshop at 6th Annual Meeting of The Academy for Professionalism in Health Care, Baltimore, USA

**dr. Marco Carvalho & prof. Paul Brand**
- Brilliant Failures, ROGANO, Basel
(Invited) lectures, workshops given by LEARN-ers

prof. Götz Wietasch
- Organisation and chair: Invitational on portfolio selection, workgroup portfolio, Dutch Society of Anesthesiologie, Utrecht
- Lecture on research in wellbeing: ‘Onderzoek over welzijn: Wat weten we en wat weten we (nog) niet?’ At the NVMO special interest group ‘Welzijn van de (toekomstige) zorgprofessional’ meeting, Utrecht
- Workshop TL-02 on Coaching as a Method for the Development of Active, Reflective Healthcare Professionals at International Congress of Residential Education, Pre-conference
- Workshop FD-07 on Learning by asking for and receiving feedback, at International Congress of Residential Education
- Workshop FD-08 on Successful coaching of residents: An active approach with the (T)GROW method, at International Congress of Residential Education
- Weerbaar opleiden: Over passie, autonomie en het verleggen van grenzen, Speaker, Inaugural lecture, Academic building RUG, Groningen, The Netherlands

dr. Yvonne ten Hoeve
- 10th International Conference for Nurse Practitioner / Advanced Practice Nursing speaker

prof. Jan ter Maaten
- Workshop MTE Sessie “teams are made, not born” Hoe maak ik een dreamteam op de SEH? Nederlandse Internistendagen, Maastricht

dr. Mike Huiskes
- ‘Interaction between Doctors: Intersubjectivity and Accountability’, speaker at the Vereniging Interuniversitair Overleg Taalbeheersing (VIOT)
- ‘Development of communication skills of orthopaedic surgeons: a CA study’, speaker
- ‘Action Formation in the OR’, speaker
- ‘Interactional realization of critical tasks in the operating theatre’, speaker
- ‘Learning to guide surgical teams. Vergelijking Gesprechtsforschung’, speaker
- ‘Fingerprints of supervisors. How supervisor control the hands of surgical trainees’, speaker
- ‘Symposium on ethnographic research on interaction in the OR’, organizer

Nico Leenstra
- ‘Aios houden opleiders een spiegel voor’. Workshop at the MMV conference 2018, Nieuwegein. (co-lead with Linde van Genugten, resident Obstetrics & Gynaecology at Deventer Hospital)

Anne van Gaalen
- Game-based Learning in Medical Education. Workshop Academie Verloskunde Amsterdam Groningen. Lecture, Zwolle
- Nederlandse Anatomen Vereniging and NVMO themamiddag. Systematic Review Gamification in Medical Education
LEARN’S mission is focused on having an impact on healthcare delivery through innovative and transformed healthcare education, clinical practice, and research. We therefore strive to be of societal relevance. The examples below illustrate our aim and focus.

Special interest group NVMO on well-being of (future) healthcare professionals

dr. Jelle Prins and prof. Debbie Jaarsma
• Founded the new special interest group of the NVMO and organize 5 national meetings per year.

dr. Joke Fleer and prof. Debbie Jaarsma
• Since 2015 ‘The Juggle Study’ is set up: a large prospective cohort study, which investigates predictors of burnout in medical students. The Juggle Study already has a large spin-off, with medical faculties within (e.g. Maastricht) and outside the Netherlands (e.g. Belgium, Mexico, India) expressing their interest to participate.

prof. Götz Wietasch
• Development and evaluation of a (local) resilience training program. The 10 session program includes modules with focuses on coping with residency challenges as conflicts & failure, mindfulness & positive psychology and self-esteem & -compassion. (M. ten Duis-Winkel, J.K.G. Wietasch en H.B.M. van de Wiel: Formative evaluatie Soft Front Strong Back Training. OOR NO research rapport about a pilot study on a modular resilience training for anaesthesiology residents. According to the results of this investigation an additional pathway will be integrated in the anesthesiology residency program at the UMCG.
• National inventory of wellbeing initiatives for students and residents with the goal to foster mental health and wellbeing of (future) health professionals. The inventory focus on effectiveness of programs, what can we learn form each other and what are best practices in wellbeing support of residents.

Simulation and Skills acquisition in the UMCG: WEBSTER

• In October 2018, the WEBSTER program saw the light. WEBSTER stands for Wenckebach Simulation Center for Education & Research Training and its primary goal is to promote the organization, innovation, and research of simulation education in the broadest sense of the word. Quality and safety are important for the patients and employees of the UMCG. The WEBSTER program provides for setting up and expanding training courses in both the skill center and in the workplace. In collaboration with the Q&S department, calamities that have occurred in the UMCG are converted into scenarios that can be trained, so that more people can learn from them and the chance of recurrence diminishes. The research program of WEBSTER is naturally housed within LEARN.

Nico Leenstra
• The UMCG Wenckebach Institute established the STAP (Simulation-based Teaching and Practice) teach-the-teacher program, which in the past decade has provided nearly 500 trainees across the Netherlands with the didactic skills and knowledge that are essential to high-quality simulation-based medical education. In collaboration with the WEBSTER program, the content and methods within the course are continuously being evaluated to the meet the latest standards. Instructors: Albert Jan Klein Ikkink, Roelie Sitepu and Nico Leenstra
LEARN'S mission is focused on having an impact on healthcare delivery through innovative and transformed healthcare education, clinical practice, and research. We therefore strive to be of societal relevance. The examples below illustrate our aim and focus.

### Curriculum innovations

**dr. Joke Fleer**
- Results from the Juggle Study and interviews with medical students have been used to set up the line leadership development within the medical curriculum and the faculty program aimed at personal development.

**prof. Götz Wietasch**
- Development and implementation of a national accreditation system for PGME institutes and regional speciality bound PGME programs (Chairman accreditation development committee, Dutch PGME accreditation authority - RGS).
- Implementation of the new PGME institutional accreditation program on a national level (member of the accreditation implementation committee, Dutch PGME accreditation authority - RGS) as well on a regional and local level (member of the institutional accreditation steering committee, UMCG). One of the products is a practical guideline to facilitate teaching hospitals in preparing for the institutional certification (M Grave, L Soetman, T Stopel, W van der Goot, M de Graaf, JKG Wietasch: Handleiding “klaar voor de instellingsvisitatie in de OOR N&O”)
- Development of a national electronic competence based portfolio which focused on individual development and incorporates full personal educational planning, feedforward and entrustable professional activities (Chairmen project group e-portfolio, Dutch Society of Anesthesiology - NVA).
- Development and implementation of updated third year master program focusing on development of professional activities, competency based development and interprofessional education (Member of the steering committee on master G2020 implementation, UMCG).

**Fundhy Prihatanto**
- Fundhy contributed to the curriculum development of study programs in Universitas Airlangga and its partners. It included educational innovations in the aspects of teaching and learning methods, learning media, and assessment. He also was involved in medical education-related activities in a national context for skills training development, the association of medical educator, and national exam of medical students.

### Faculty Development program

**dr. Marco Carvalho**
- Marco actively participated in the innovation project to develop an online platform for faculty development. The work involved to review the literature about feedback, lecturing, and assessment, write the content of the online modules, and come up with the concept for design of the platform. Marco joined the group of development in a leading position. Marco also offered support to the group and participated in all the meetings and in some of the training activities.
PRIZES

prof. Gerda Croiset
Anouk Wouters NVMO prijs beste proefschrift

dr. Yvonne ten Hoeve
Friend of Nursing Award– Sigma Global Nursing Excellence: Rho Chi at-large Chapter

Tineke Kingma
Excellentie door docentstrategie: vrijheid en structuur in balans voor elke student. Hanze University of Applied Sciences, Utrecht University, Windesheim University of Applied Sciences and UMCG

dr. Marco Carvalho
Medical Teacher Poster Prize – 1st place, AMEE, Basel
prof. Debbie Jaarsma

2015 – 2019 The project Practice-oriented research on excellence in institutions of further and higher education (Praktijkgericht onderzoek Excellentie MBO & HO: ‘Excellentie door docentstrategie: vrijheid en structuur in balans voor elke student’). (625.144 Euro, aanvragers: Jaarsma, Schönrock-Adema & van der Mark van der Wouden, Partners: UMCG/RUG, Hanzehogeschool Groningen, Windesheim Zwolle and Utrecht University. Netherlands Initiative for Education Research (NRO))

2017 – 2020 Erasmus+ (Nuffic) IMPACCT ‘IMproving PAatient-centred Communication Competences: To build professional capacity concerning health literacy in medical and nursing education’ (2017-1-NL01-KA203-035290. 449.956,- euro; Partners: Netherlands, Germany, Ireland, Italy, Slovakia, Belgium/ UMCG, NUIG, EURASHE, ARS, UPJS, RUG, Jacobs University)


2017 – 2019 On being a female full professor: An international study exploring the experiences of women working in medical education. (Ottawa, Canada; Aberdeen, UK; Bethesda, USA; UMCG). Medical Education Research / Medical Innovation Project Application ($15,580 Canadian dollars)

2018 - 2021 Erasmus+ (Nuffic) OIAPT ‘Online Adaptive International Progress Test (2018-1-NL01-KA203-038925). 332.720,- euro; Partners: Netherlands (Maastricht University and Groningen University), UK, Finland, Portugal, Poland)

prof. Paul Brand

2016–2020 Learning Evidence Based Medicine through Deliberate Practice. Regional Innovation Fund Educational Region Northeast (€ 50.000) and Healthcare Institute the Netherlands (€ 50.000)

2017–2021 Shared decision making in clinical practice: effects on patient motivation and outcomes. Isala Innovation & Science Fund (€ 174,250)

2017–2018 Burnout among residents: role of the educational climate Isala Innovation & Science Fund (€ 6,875)

2017–2018 Development of clinical Teacher Thermometer. Regional Innovation Fund Educational Region Northeast (€ 50.000)

prof. Gerda Croiset

2019–2022 NRO Unintended effects of selection on medical student and applicant diversity: What can we do about this? Project namens de OCG € 342.981 (GC main applicant)
dr. Esther Helmich

2018-2022  In search of stories: a narrative, multimodal intervention for spiritual care of advanced cancer patients. KWF Kankerbestrijding: € 510,694.50
2017-2018  Exploring Rich Pictures to help patients with incurable cancer to express the experience of having cancer in the context of their lives. De Jonge Akademie (KNAW): € 4000

prof. Götz Wietasch


dr. Joke Fleer

2018-2019  Innovatiegelden voor de project ‘De ontwikkeling van de lijn leiderschapsontwikkeling in de master Geneeskunde en een faculteitsbreed programma gericht op persoonlijke ontwikkeling’. Innovatiegelden en studievoorschotmiddelen: € 151.000

2018-2019  Studievoorschotmiddelen to set up the interfacultary minor ‘More healthy years: Current challenges in public health’. Innovatiegelden: € 100.000

2017-2018  ‘Doorontwikkeling lijn leiderschapsontwikkeling’, Innovatiegelden: €92.000

dr. Bram Jacobs and dr. Jasperina Brouwer

2019-2021  Exploring the professional social networks of junior doctors. Onderwijs-en opleidingsregio Noord- en Oost-Nederland: € 50,000