







INTRODUCTION

I proudly present the School of Health Professions Education (SHE) Annual Report for 2022. It offers a succinct overview of the activities, outputs and impact that SHE has generated in 2022. As SHE, we look back on another year with exciting projects, impactful events and publications and other successes. We also added a number of new colleagues to our onsite teams and saw the further expansion of our network of SHE collaborators.

SHE continues to focus on four priorities:

- invest in synergy between SHE Research, Educates and Collaborates activities;
- create more support for professional development of all SHE staff:
- renew our communication and marketing strategies and activities; and
- develop a strategy for local, national and international collaborations.

We are seeing the effects of our investment in all of these areas. Two concrete examples are meetings organized by and for junior staff members and a completely renewed SHE website and LinkedIn presence.

In 2022 we started the process of developing our future Research Program (2024-2030). This started with a survey among SHE staff, followed by round table discussions. This process continues into 2023 and will include a diversity of stakeholders. I look forward to updating you on this process in our next Annual Report.

I hope this Annual Report serves as an invitation to (continue to) engage with people from the SHE Community. Together, we can work towards a world in which all healthcare professionals are well educated and in the best position to contribute to high quality care.

Pim Teunissen

Scientific Director of the School of Health Professions Education



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SHE IN 2022

Vision, mission and values

SHE is a graduate school for research, education, and innovation in health professions education (HPE). Since its inception, the vision and mission of SHE has been clear and consistently focused on a global impact on healthcare through investment in research of healthcare education and the translation of research insights to education and innovation in HPE. Research quality, societal relevance and a continuing focus on viability are the focus of SHE's Management Team. SHE's **vision** is captured in the following two sentences:

Excellent healthcare requires evidence-informed models for the education of future and current healthcare professionals. Through research, education, and innovation, SHE works towards a world in which all healthcare professionals are well educated and in the best position to contribute to high quality care.

The **mission** of SHE:

SHE aims to be a leading hub for research and innovation of HPE worldwide. SHE connects HPE research to educational activities, consultancy, innovation and impactful global projects.

This mission emphasizes that SHE is the hub in a broad and global network of healthcare practitioners, researchers, educationalists and policy developers who share a passion of the development of HPE. Moreover, the second sentence helps to focus on the synergistic value of connecting theory, research and practice to move the field of HPE forward. In 2022 SHE has continued work in line with this mission, exemplified by the various activities and achievements that are described in this annual report. The leading hub role of SHE is expressed in our intellectual, physical and digital presence in the global field of health professions education.

The values that characterize SHE are 'open, inquisitive, socially responsible, collaborative, innovative and ambitious'. These values are recognizable in our work and in how we work together with a variety of local to global partners. In meetings throughout 2022 with SHE staff, project collaborators, and SHE (PhD) students these values have been repeatedly emphasized.

SHE organization

The organizational structure of SHE follows its main activities. The three core activity domains of SHE are called SHE Research, SHE Educates, and SHE Collaborates. These activities are coordinated by the SHE Management Team.

Prof. Pim Teunissen leads SHE. He is the scientific director and chairs SHE's Management Team. He combines his work as SHE director with clinical work as a gynecologist at Maastricht University Medical

Center (MUMC+). In the SHE Management Team each core activity domain is represented. Prof. Anique de Bruin represents SHE Research and is vice-director of SHE. Dr. Danielle Verstegen represents SHE Educates and Geraldine Beaujean represents SHE Collaborates. Sabina Bulic is SHE's Managing Director and also part of the SHE MT. Nicky Verleng is SHE's Office Manager.

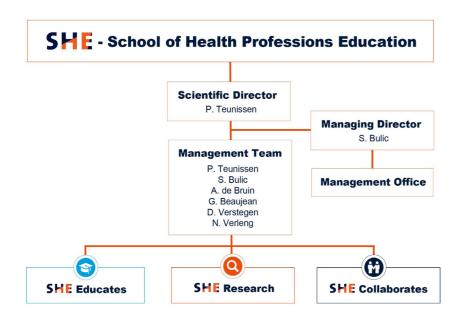






Figure 2. Organizational dynamics of SHE

Strategy; changes and development

The vision and mission of SHE, combined with our values, inform our strategy and strategic choices. An important objective is to make sure our research informs our educational practice and vice-versa. As an example, in 2018 SHE decided to revise the Master of Health Professions Education and to align its instructional design with the state of science in HPE. This effort has been led by Dr. Daniëlle Verstegen. The result is a much more flexible programme based on individualized guidance and feedback that has started with the first cohort of students in May 2021. In 2022 the program was fully operational with the first cohort expected to graduate in 2023. To further increase synergy between SHE core activities, the SHE Management Team focuses on further developing a shared identity, shared goals and providing guiding principles based on SHE's vision, mission and strategy. Moreover, in 2022, we invested in a position for a researcher on the topic of educational and individual adaptability with the aim to connect our core activities in this project. Working on the connections between research, education and consultancy, is the basis for recognizing opportunities in line with our vision and mission, strengthening collaborations within and outside Maastricht University and Maastricht UMC+. Building on these efforts, SHE will continue to play a leading role globally in developing the field of HPE.

Strategic choices that remain a strong foundation for SHE are the double-chain approach. The first chain concerns the connection between research and impact. Starting with application-oriented educational research is essential for finding new and better ways to educate health professionals. The findings of this research consequently feed into the educational activities of SHE. The chain is completed when the research findings and related educational activities impact the quality and innovation in educational institutes and healthcare organizations, opening up new opportunities for research. The second chain focuses on impact on individuals and teams. This starts with short courses for participants who want to become familiar with health professions education. Next in the chain are certificate courses for participants who want to learn more about particular topics in health professions education, followed by the MHPE programme for participants who want to become academic educators, leaders or researchers of health professionals. Ending the chain is a PhD programme for participants who want to further develop as scholars in health professions education. It is not uncommon for students to first take a short course and end up doing research in the PhD programme.



Figure 3. Double Chain approach of SHE

Management team SHE



Pim Teunissen, PhD, MD Role: Scientific Director SHE

Pim Teunissen was trained as a Medical Docter (M.D.) and earned his PhD in medical education at VU University Amsterdam. He is working clinically as a Gynaecologist and maternal fetal medicine specialist at the Maastricht University Medical Center (MUMC+). In 2017 he was appointed Professor of Work-based learning in Healthcare at the Faculty of Health, Medicine and Life Sciences. In 2020 he was appointed as the Scientific Director of SHE. His area of expertise is on workplace learning, the interaction between curriculum design and educational practice, transitions and learner well-being.



Sabina Bulic, L.L.M. *Role: Managing Director SHE*

Sabina Bulic studied Dutch Law (Master Private Law) at the Faculty of Law at Maastricht University. During her education, she started working at Maastricht University as a Project Manager and was appointed as the Managing Director of SHE in November 2019. In her role as Managing Director, she is responsible for the accounting within the school and she is the head of the Management Office of SHE.



Anique de Bruin, PhD Role: Vice-Director SHE

Anique de Bruin was trained as a psychologist and earned her PhD in 2006 at the Erasmus University Rotterdam. In February 2019 she was appointed Professor Self-regulation in Higher Education at the Faculty of Health, Medicine and Life Sciences. Her area of expertise is (the linkage between) metacognition, supporting learning strategies, self-regulated learning and clinical reasoning. Anique de Bruin represents SHE Research in the Management Team of SHE and is involved as the Vice-Director of SHE.



Geraldine Beaujean, MD, MHPE *Role: Head of SHE Collaborates*

Geraldine Beaujean studied Medicine at the Medical Faculty of Maastricht University and is thus trained as a medical professional in an innovative educational manner (e.g. by Problem Based Learning and Early Clinical Exposure). After graduation, she worked a few years in regional health centers and hospitals, gaining experience in medical practice. Subsequently, she turned to medical education in the context of developing countries. She lived and worked in Kenia and Sudan for several years. In 2002 she returned to Maastricht University and since 2011 she is the director of SHE Collaborates, the international collaboration office of SHE. Her team engages in long term collaborations worldwide to support higher education in the area of health.



Daniëlle Verstegen, PhDRole: Head of SHE Educates, Programme Director Master of Health Professions Education

Daniëlle Verstegen has a background in learning psychology and cognitive Science and earned a PhD in Educational Sciences. She worked for several research institutes and started at Maastricht University in 2008, in the e-learning task force of the Faculty Health, Medicine and Life Sciences. She was appointed as programme director of the MHPE programme in January 2018 and as lead for SHE Educates in November 2020. Her area of expertise is instructional design for student-centered learning in e-learning, blended and online learning.



Nicky Verleng Role: Office Manager SHE

Nicky Verleng has started working at Maastricht University in 2009 and has been a dedicated Office Manager of SHE since 2019. In her role, she assists the Management Team and is responsible for the PhD secretariat in which she is responsible for the administrative procedures regarding the PhD candidates of SHE.

Facts & Figures

STAFF AT SCHOOL LEVEL (NUMBER AND FTE)		FUNDING			
School	N/FTE 2022	Funding 2022	Fte		%
Scientific staff FHML	38 / 10,10 fte	(1) Direct funding	12		33,96%
Postdocs	10 / 3,90 fte	(2) Research grants	6,10		17,26%
Internal PhD-students	12 / 9,89 fte	(3) Contract research	4,99		14,12%
Total research staff	60 / 23,89 fte	(4) Other	12,25		34,66%
		Total	35,34		100,0%
Support staff (research)	5 / 2,00 fte				
Support staff (managerial)	10 / 4,19 fte	TURNOVER			
Total support staff	15 / 6,19 fte				
	_	Turnover 2022 (x1000)		€	%
Total staff incl. academic hospital	75 / 30,08 fte	Government funding (dire	ct)	1.839	29%
Total staff excl. academic hospital	75 / 30,08 fte	Revenues contract educat	ion	1.871	30%
		KNAW/NWO/ZonMw (ind	irect	367	6%
SHE Collaborates	9 / 6,85 fte	government funding)			
SHE Educates	54 / 4,60 fte	0,		1.532	24%
Total FTE Research, Collaborates and Educates staff	35,34 fte	party funding)			
		Other revenues		334	5%
External PhD students	97	Internal settlements		353	6%
Honorary professor	4	Total		6.296	100%
Visiting fellows/professors	nb				

SHE EDUCATES

SHE has more than 40-years of experience in implementing student-centered learning. Our courses are designed to innovate health professions education worldwide and range from a short onsite summer school or online course to a full Master of Science degree programme.

Courses

Introductory course

SHE Summer Course

The SHE Summer Course is a one week onsite course that offers an introduction and global overview of the Maastricht approach: theoretical insights and experiences in managing and assessing student learning in student-centred curricula.

Short Courses

Writing a PhD Research proposal

In this advanced course participants learn how to write a high quality PhD research proposal consisting of a series of studies that are expected to be of interest to international peer-reviewed journals. The course consists of two full-time weeks onsite with an online part in between. At the end of the course, students are expected to have developed a complete PhD proposal, to that they can start collecting data for their first study in their own educational setting.

Critical choices in Oualitative Research

This advanced online course focuses on core concepts and practices in qualitative research. Participants discuss essential choices in the qualitative research process. They bring in their own project and work on designing their study and/or analyzing their own data.

Certificate Courses

The online SHE Certificate Courses offer the opportunity to acquire knowledge and skills related to major topics in health professions education. The Certificate Courses are equivalent to specific sections of our Master of Health Professions Education (MHPE) and credits can be transferred for those who opt for the full programme within two years. In 2022, the Certificate Courses were adapted to the new MHPE format. Two courses were provided: Curriculum and Instruction, and Organization and Leadership.

JMHPE

The JMHPE is a joint health professions education programme that SHE offers in collaboration with Suez Canal University in Egypt. JMHPE is a one year, fully online programme, conducted completely through distance learning and guided by staff of both institutions. Upon completion of the programme participants receive a certificate from Suez Canal University, with recognition of UM contributions.



Courses

Summer course (July 2022) Brazil 1 Deutschland 2 India 1 6 Iraq Israel Nederland 1 Portugal Total number of participants 26 4C/ID Workshop (November 2022) Germany 1 Italy 1 Netherlands 6 **United Kingdom** 1 Total number of participants

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Writing a PhD Research Proposal twice (starting in March and October)

March session 2022	
Belgium	1
Brazil	1
Kenya	1
Netherlands	1
Pakistan	1
Saudi Arabia	1
United States	1
Total number in March	7
October session 2022	
China	3
Egypt	1
Japan	2
Netherlands	2
South Africa	1
Total number in October	9

Total number of participants

Critical Choices in Qualitative Research (November 2022)

Netherlands	1
United States	1
Aruba	1
Chile	1
India	2
Ethiopia	2
Total number of participants	2

Certificate Course Organization & Leadership (2022)

Canada, Chili, Rwanda, Germany Total number of participants

Certificate Course Curriculum & Instruction (2022)

9

Canada, Israel, Switserland, Australia, Netherlands, UK Total number of participants

JMHPE - Joint online HPE programme with Suez Canal University Egypt

Enrolled participants in 2022 22

Graduates of JMHPE in 2022

Abdullah Glil Ashgan Alkushi Ashraf Fathy Elshehry Aya Elsadiea Hanim Hassan El-Zeftawy Nour Bader Al-Saleh Salah-Ud-Din Khan Bibi Sumera Keenoo Sayed Abd Elsabour Kinawy Mohammed Ali

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Master of Health Professions Education

The Master of Health Professions Eduction (MHPE) is a two year, part-time and blended learning programme for teachers, designers and leaders in initial and workplace-based education in the health professions. MHPE is an accredited Master of Science programme.

In 2022, the MHPE programme completed the implementation of the **entirely new MHPE curriculum**: an innovative competency-based curriculum centred around authentic learning tasks (60% electives) and programmatic assessment. A new and intensive coaching programme was installed to support students in planning their own learning journey and building their portfolio. Students and staff collaborated in shaping the coaching process.

MHPE Cohort 2022

Maastricht

24 participants: Singapore, Canada, Nederland, Vietnam, Denmark, Estonia, Germany, Japan, Philippines, Luxembourg, Spain

Canada

12 participants

New York

8 participants

Singapore

7 participants

Total number of participants

51



Presenters and topics of the MHPE Master Theses 2022

Alisha Burrell

Talking about notes: discharge summary quality and improvement on a geriatric inpatient unit. Supervisor: Mark Goldszmidt (MHPE Canada).

Aminah Alsulaiman

Factors Affecting Novice Trainers'
Trust Decisions to Trainees in the
Postgraduate Family Medicine Clinical
Teaching. Supervisor: Cees van der
Vleuten (MHPE Maastricht).

Barry Czeisler

What factors increase and decrease interest in neurology for medical students? Supervisor: Adina Khalet (MHPE New York).

Brittany Perija

Exploring the Perspectives of Internal Medicine Residents on the Role of Senior Residents acting as Coaches for Junior Learners. Supervisor: Herma Roebertsen (MHPE Maastricht).

Camille Laflamme

CBME in Residency: Feedback as a Key to Improve Self-Regulated Learning? Supervisor: Jill Whittingham (MHPE Singapore).

Cia Sin Lee

Qualitative study on the perceived enablers and barriers to interprofessional education (IPE) for diabetes care in primary care. Supervisor: Jascha de Nooijer (MHPE Singapore).

Chloe Bogaty

The CanMEDS Competency Framework in laboratory medicine: exploring how professional roles find their place outside the clinical environment. Supervisor: Janneke Frambach (MHPE Maastricht).

Diana Fort

The Gender Gap in Medical School Leadership: Effect of Organizational Culture. Supervisor: Maria Hubinette (MHPE Canada).

Deanna Wai Ching Lee

Professional identity formation among Senior Clinical educators. Supervisor: Herma Roebertsen (MHPE Maastricht).

Dustin Brinker

Are critical reading and writing skills lost arts in medicine? An exploratory

study. Supervisor: Adina Khalet (MHPE New York).

Elizabeth Yetter

Learning Themes with the Greatest Impact on Learners: A Qualitative Analysis MHPE Thesis. Supervisor: Lisa Altshuler (MHPE New York).

Edwin Betinol

Exploring adaptive expertise as a threshold concept: A qualitative study on the graduating physical Therapy student's perception of expertise development. Supervisor: Glen Regehr (MHPE New York).

Erin Peebles

A critical narrative analysis of how clinicians cope with challenges related to social determinants of health in practice. Supervisor: Mark Goldszmidt (MHPE Canada).

Fleur de Meijer

Does Prompting Improve
Future Specialists' Evaluation of
Communication Skills During End of
Life Discussions? Supervisor: Anique de
Bruin (MHPE Maastricht).

Gaby Yang

Who's the Leader: Challenges of Entrusting Simulated Pediatric Resuscitation. Supervisor: Rose Hatala (MHPE Canada).

How Cheng Low

A study on novice trainees' perceptions of attaining GI endoscopy learning goals. Supervisor: Anique de Bruin (MHPE Maastricht).

Heidi Tan

Measuring Interprofessional Collaboration in Fluid Healthcare Teams through the Lens of Teamness. Supervisor: Renee Stalmeijer (MHPE Singapore).

Helen Hai Jung Rhim

Impact of Board Certification on Pediatric Hospitalists as a Community of Practice. Supervisor: Dorene Balmer (MHPE New York).

Ichita Yamamoto

How do mandatory emergency medicine rotations contribute to the junior residents' professional identity formation? Supervisor: Danielle Verstegen (MHPE Maastricht).

Jennifer Cardenas

How do anesthesiology supervisors signal and address uncertainty in their

residents? Supervisor: Francisco Olmos (MHPE Maastricht).

Kayla Nelson

Residents as Supervisors: A Cognitive on How Senior Residents Make Entrustment Decisions. Supervisor: Glenn Regehr (MHPE Canada).

Melanie Aube-Peterkin

Feedback and formative assessment in Competency by Design: The experience of residents and supervisors within a urology training program. Supervisor: Tiuri van Rossum (MHPE Maastricht).

Michiel Schokking

Manikin-training in basic 2-dimensional echocardiography of neonatologists: Commonalities and differences in instructors' approaches. Supervisor: Peter van Rosmalen (MHPE Maastricht).

Nicole Hugel

An exploration of senior medical resident practice variability in problem list construction. Supervisor: Mark Goldszmidt (MHPE Canada).

Senghkoun Lim

Challenges in Competency-based Medical Education Implementation in a Lower-middle Income Country: A Qualitative Case Study. Supervisor: Cees van der Vleuten (MHPE Maastricht).

Shoichiro Amari

The effectiveness of video-assisted feedback in the acquisition of neonatal intubation. Supervisor: Pascal van Gerven (MHPE Maastricht).

Yasir Elhassen

Students' Perception about their Autonomy, Relatedness, and Competence when they Use Staged-Release Model for Problem-Based Learning. Supervisor: Judith Sieben (MHPE Maastricht).

Yuka Yamazaki

Factors influencing self-efficacy of medical students in biostatistics learning. Supervisor: Carlos Collares (MHPE Maastricht).

Veena Rajkumar

Understanding perspectives of faculty about professionalism teaching in a Paediatric residency program – a qualitative study in an Asian setting. Supervisor: Carolin Sehlbach (MHPE Singapore).

Vijaya Ramanathan

Connotation and perception of stakeholders on peer assessment.
Supervisor: Peter van Rosmalen (MHPE Maastricht).



SHE RESEARCH

SHE Research Programme – Looking towards the future

The focus in our 2018-2023 programme of research, called 'Task-centered learning environments in the health professions' (see here) is on problems that have both theoretical and practical relevance. In terms of research methods, researchers at SHE use all methods that may help to answer relevant research questions, ranging from descriptive-qualitative studies and experimental-quantitative studies, through narrative reviews and statistical meta-analyses, to short intervention studies and longitudinal design-based research projects. SHE's research programme spans four interrelated themes:

- 1. Goals, values, and approaches to evaluation. Health professions education aims to train healthcare professionals to contribute to excellent care within the dynamic context of healthcare. This requires an understanding of which competences can best be trained, how education can contribute to improving the quality of care, and how health professions education can best be evaluated.
- 2. Approaches to instruction. In education, there are no instructional approaches that always work:

- particular methods support particular goals under particular conditions. Healthcare education in particular covers a great diversity of contexts, from classroom settings within medical schools through public health information sessions provided in the community, to tertiary care hospitals and solo practices in remote areas.
- 3. Approaches to assessment. Research findings consistently indicate that assessment design and assessment practices always and inevitably need compromising and that any single assessment is bound to be flawed. High-quality assessment therefore involves a combination of carefully selected assessment methods in a programme of assessment that is fit for purpose and optimally aligned with intended learning outcomes and approaches to instruction.
- 4. Approaches to Implementation. The effects of approaches to evaluation, instruction, and assessment are always mediated by perceptions and expectations of students, teachers, and other stakeholders. Furthermore, each local context will differ to some extent from the context in which the approach was developed and/or in which prior research was conducted, which poses many challenges to successful implementation.

The research programme was designed to cover a period of 6 years, from 2018-2023. This research programme is serving SHE well in terms of organizing and focusing on main research lines. To keep our research programme up-to-date and in line with current and anticipated developments in our field, SHE aims to start the collaborative process of jointly developing our research foci for the next 5-10 years. Late 2021, the SHE/Research Management Team outlined a set of activities for 2022 to help develop our future research programme. This exciting project will involve SHE staff, our SHE community and experts in the field. We aim to have our next research

programme ready in 2023. The process of developing our future research agenda aligns with our approach to deliberately reflect on why we do research, how and where we achieve impact through our research, and enable SHE staff to make decisions in line with our shared ambitions and goals.

PhD Programme

In 2022, we welcomed 23 new PhD students who work on a variety of pressing issues in health professions education.

New PhD students 2022

Ryan, M.

Summative entrustment decisions in undergraduate medical education: exploring gaps between theory and implementation to realize the promise of a competency-based advancement model.

Hornstra, S.

Learning for demanding professions: The integration of skills training and academic education through instructional design.

Anderson, H.

Understanding Equity in Programmatic Assessment. **Isahakyan, A.**

Teaching Visual Problem Solving in Health Sciences.

Isbey, L.

Promoting self-regulated learning skills in the clinical reasoning process.

Wenmaekers, N.

Comfortably Caring: Exploring interpersonal skills wisdom.

Lee, A.

Continuity of supervision: Is it what we think it is and do we have evidence to support it?

Waheed, G.

Educational Intervention on Communication Skills of Medical Students: Consultation with Rural Women in Sexual and Reproductive Health.

LI, Z.

Examining effectiveness of designing and integrating virtual patients (VPs) in classroom.

LIU, X.

The Effect of Culture Diversity on Critical Thinking of International Master Students for Curriculum Development

Zhang, G.

Leadership and Followership within Interprofessional Collaboration in Healthcare.

Younas, A.

Entrustment Decisions: Exploring the Roles of Patients in a Health Care Educational Program.

Pattinson, S.

Survive or Thrive: the transition from graduated student to internship doctor in the South African clinical context.

Strachan, S.

How should a learning electronic health record be scaffolded to improve undergraduate medical student's digital anamnesis skills?

Eickmeyer, A.

Structural Competency: (Where) Does It Belong in Undergraduate Medical Education?

Hartmann, C.

Development of a method to analyse system functions for successful implementation of learnercentred educational strategies in undergraduate health professions education programmes.

Sow, C.F.

Exploring the factors that influence or hinder the transfer and translation of learning of procedural skills from the simulation laboratory to the clinical practice. **Bosveld, M.**

Active participation of patients and informal caregivers in education and health care.

Theys M.

Adaptivity in Health Professionals.

Wenzel, N.

Investigating the impact of breaks on students' effort regulation during self study.

Nelissen, T.

How can higher education students make sense of student-facing learning analytics and study-data for self-regulated learning?

Dickens, R.

Establishing trust and empathy as a professional skill in paediatrics.

Arooj, M.

Development of Comprehensive Change Management Model for Evolving Undergraduate Medical Curriculum.



In August 2022 we announced the nominees and winner of the SHE Dissertation Award 2021. Congratulations to Jon Ilgen, Suzanne Schut and Anique Atherley for their nomination. And many congratulations to Anique Atherley for being the winner of this award!

PhD Dissertations completed in 2022 at Maastricht University

Jelsma, J.

Metal-on-Metal Hip Arthroplasty; Physical Activity Monitoring, Outcomes and Systemic Toxicity.

Date of defense: January 21, 2022 **Supervisors**: Prof. dr. I.C. Heyligers, Dr. Ir. B.P. Grimm, Dr. M.G.M.

Schotanus

Beuken, J.

Waves towards harmony: Learning to collaborate in healthcare across borders.

Date of defense: March 25, 2022 **Supervisors:** D.H.J.M. Dolmans, D.M.L. Verstegen, M.E.J. Bouwmans

Jonge de, L.

Is it all in the mind? Stakeholder conceptions on workplace based assessment.

Date of defense: March 28, 2022 **Supervisors:** Prof.dr. J.W.M. Muris,

Prof.dr. C.P.M. van der Vleuten, Prof. dr. A.W.M. Kramer

Pieters, J.

Let's talk about it: Palliative care education in undergraduate medical curricula.

Date of defense: April 1, 2022 **Supervisors:** M.H.J. van den Beukenvan Everdingen, D.H.J.M. Dolmans, D.M.L. Verstegen

Cantillon, P.

The Social construction of clinical education: being and becoming in clinical teams.

Date of defense: April 28, 2022 **Supervisors:** T. Dornan, W. de Grave

Kruepunga, Nutmethee

Development of the caudal part of the human embryo.

Date of defense: May 17, 2022

Supervisors: S.E. Koehler, J.P.J.M. Hikspoors, W.H. Lamers, W. Weerachatyanukul (Mahidol University Bangkok)

Bransen, D.

Beyond the self: A network perspective on regulation of workplace learning.

Date of defense: June 22, 2022 **Supervisors**: E.W. Driessen, M.J.B. Govaerts, D.M.A. Sluijsmans

Lee, J.

The Medical Pause in Simulation Training.

Date of defense: June 8, 2022 **Supervisors:** J.J.G. van Merriënboer, H.H.L.M. Donkers, H.Jarodzka

Biwer, F.

Supporting Students to Study Smart – a learning sciences perspective.

Date of defense: July 8, 2022 **Supervisors:** A.B.H. de Bruin, M.G.A. Oude Egbrink, W. Wiradhany

Kellar, J.

Becoming Pharmacists: Professional identity struggles of a profession in transition.

Date of defense: October 26, 2022 **Supervisors:** M.G.A. Oude Egbrink, C.P.M. van der Vleuten. Zubin Austin

Brouwer, E.

Medical education without borders. The what, why and how of International Medical Programmes.

Date of defense: December 12,

2022

Supervisors: Prof Sylvia Heeneman, Prof Janus Janczukowicz (Lodz, Polen), Dr Rashmi Kusurkar, Prof Anja Krumeich, Dr Dominique Waterval

SHE HIGHLIGHTS - OUTPUT AND IMPACT

Articles

Torre, D., Schuwirth, L., Van der Vleuten, C. & Heeneman, S. (2022). An international study on the implementation of programmatic assessment: Understanding challenges and exploring solutions. Medical Teacher, 44(8), 928-937.

Beuken, J. A., Bouwmans, M. E. J., Dolmans, D. H. J. M., Hornstra, S. P. A., Vogt, L. & Verstegen, D. M. L. (2022). Design, implementation and evaluation of a postgraduate workshop on cross-border healthcare in Europe - Mixed methods research. International Journal of Care Coordination, 25(4), 124-131.

Kinnear, B., Schumacher, D. J., Driessen, E. W. & Varpio, L. (2022). How argumentation theory can inform assessment validity: A critical review. Medical Education, 56(11), 1064-1075.

Kolm, A., de Nooijer, J., Vanherle, K., Werkman, A., Wewerka-Kreimel, D., Rachman-Elbaum, S. & van Merrienboer, J. J. G. (2022). International Online Collaboration Competencies in Higher Education Students: A Systematic Review. Journal of Studies in International Education, 26(2), 183-201.

Klasen, J. M., Teunissen, P. W., Driessen, E. W. & Lingard, L. A. (2022). 'It depends': The complexity of allowing residents to fail from the perspective of clinical supervisors. Medical Teacher, 44(2), 196-205. Bransen, D., Govaerts, M. J. B., Panadero, E., Sluijsmans, D. M. A. & Driessen, E. W. (2022). Putting self-regulated learning in context:

Integrating self-, co-, and socially shared regulation of learning. Medical Education, 56(1), 29-36.

Ilishkina, D. I., de Bruin, A., Podolskiy, A. I., Volk, M. I. & van Merrienboer, J. J. G. (2022).

Understanding self-regulated learning through the lens of motivation: Motivational regulation strategies vary with students' motives. International Journal of Educational Research, 113(14), 101956.

Hui, L., Bruin, A. B. H., Donkers, J. & Merrienboer, J. J. G. (2022). Why students do (or do not) choose retrieval practice: Their perceptions of mental effort during task performance matter. Applied Cognitive Psychology, 36(2), 433-444.

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Meeuwissen, S. N. E., Gijselaers, W. H., de Rijk, A. E., Huveneers, W. J. M., Wolfhagen, I. H. A. P. & Oude Egbrink, M. G. A. (2022). When theory joins practice: A design-based research approach for leader identity development. Medical Teacher, 44(6), 636-642.

Invited lectures for scientific audiences

- Heeneman, S. (2022). Series of 3 webinars on coaching/ mentoring for Flinders University, Adelaide, Australia. May 17, June 9, June 16.
 Session 1: The Maastricht Coaching Program: Sharing of Practice; Session 2: The Maastricht Approach to Curriculum Redesign of the Bachelor of Medicine; Session 3: Coaching: What the Research Says.
- Frambach, J.M. (2022, June). Exploring the implicit meanings of 'cultural diversity' in health professions education. Invited keynote, presented at the SAAHE Conference (Southern African Association of Health Educationalists), South Africa.
- Kinnear, B. Silver linings playbook: What can MedEd learn from pandemic innovations? Invited presentation for International Conference of Residency Education, Montreal.
- Stalmeijer, R.E. (2022, August). Introduction to Qualitative Research in Medical Education. Invited lecture. Indonesia Medical Education and Research Institute (IMERI)(online)
- Stalmeijer, R.E. (2022, July). Challenging Intraprofessional Workplace Education Norms. Invited lecture. Javeriana University Colombia – Master of Health Professions Education (online)
- Stalmeijer, R.E. (2022, July). Introduction to Qualitative Research in Medical Education. Invited lecture. UNILearn Med Ed (online)

- Stalmeijer, R.E. (2022, June). Challenging Intraprofessional Workplace Education Norms. Invited Lecture. Institut für Medizinische Lehre – Berne, Switserland
- Meeuwissen, S.N.E., oude Egbrink M. (2022, March). Towards Integrated Medical Education: Getting the best out of interdisciplinary teacher teams and leaders. Invited webinar, presented at the Spring 2022 IAMSE Webinar Seminar Series
- Könings, K. D. (2022, March). Co-creation of learning environments: towards enriching students' experiences of learning and teaching. Invited keynote, presented at the INHED conference (Irish Network of Healthcare Educators, online.
- Teunissen, PW. Getting published. Workshop at the Royal College of Surgeons in Ireland (RCSI), November 2022, Dublin, Ireland
- Driessen E (2022). Key insights from education research that drive future medical education. Invited keynote lecture. Thai Medical Education Conference. Phuket, Thailand

Research grants awarded to individuals

- Moonen van Loon, J.M.W. (2022). Comenius Teaching Fellow.
 Value €49.994
- Biwer, F. (2022). Learning and Innovation Grant, awarded by Edlab, Maastricht University (main applicant). Value: € 10.000.

Grants awarded to collaborative research projects

- Stalmeijer, R.E., Varpio, L., Teunissen, P.W. (2022). How residents learn to collaborate in interprofessional healthcare teams. Funded by Association Medical Education Europe Research Grant 2021. Value € 12.000. Sum to person C.V.: €12.000.
- Compen, B., Beausaert, S. & Dolmans, D. (2022). How to support university teachers in dealing with differences among students? Learning & Innovation, Maastricht University. Value: €10.000
- Biwer, F., Waterval, D., Thomassen. S., Mak, J., & de Bruin, A.B.H. (2022). How to Study just as Smart online? EDLAB Learning and Innovation seed grant. €10.000.

Other noteworthy activities and achievements

Driessen, Pathanasethpong, Chamniprasas, Cohen, Schut, Thamasitboon (2022). Programmatic assessment across cultural contexts. Theory, lessons and applications. Symposium Ottawa conference, Lyon, France.

In this symposium, we brought together multiple perspectives – researchers, assessment experts, and program directors – to discuss issues of implementation of programmatic assessment. Programmatic assessment was introduced as a relatively new concept in health professions education in 2005. There is much interest in this assessment model and curricula are implementing or considering implementing this approach around the world.

Gerretsen, E. C. F. (2022, September). DSSH 2022 best oral presentation award: Bronchoscopy simulation training and its impact on novices' bronchoscopy skills.

This study evaluated a nationally implemented one-day bronchoscopy simulation training program for Dutch pulmonology residents (n = 64). Following the training, residents performed simulated bronchoscopies significantly faster, with improved quality. These findings highlight the effectiveness of the program in efficiently accelerating the initial phase of the learning curve for acquiring bronchoscopy skills.

Frerejean, J.: SimNEXT: Lifelong Learning in Healthcare Simulation. See $\underline{\mathrm{simnext.org}}.$

The Dutch Society for Simulation in Healthcare (DSSH) and the Maastricht UMC+ Simulation Center, in collaboration with Maastricht University's School of Health Professions Education, are working together to create a national continuous professional development program for educators in simulation-based education in healthcare. The lifelong learning program aims to provide educators with the necessary knowledge, skills, and attitudes to deliver high-quality simulation-based education. The initiative involves the participation of three other simulation centers in the Netherlands and is supported by the Society for Simulation in Europe (SESAM). See simnext.org.

SHE COLLABORATES

SHE Collaborates staff and project managers:

Geraldine Beaujean, Marlieke Bouwmans, Emmaline Brouwer, Yoka Cerfontaine, Joyce Grul, Marijke Kruithof, Mohammed Meziani, Rikus Nieuwenhuijs, Tchitula Teuns, Hennie Sijen.

Examples of partnerships and ongoing projects in 2022

Mozambique

Project: Vibrações: Implementing a stepped-care model approach to design and develop a Mozambican youth-friendly sexual and reproductive health website

Lead organization: SHE Collaborates

Funded by: Nuffic OKP (OKP-TMT+.21/00046) Project Duration: April 2021 – March 2023

Project Manager: Marlieke Bouwmans / Joyce Grul

Partners:

Aidsfonds – Soa Aids Nederland (Amsterdam, the Netherlands) Wits Reproductive Health and HIV Institute (Wits RHI), University of Witwatersrand (Johannesburg, South Africa) Associação Coalizão da Juventude Moçambicana (Maputo, Mozambique)

Universidade Católica de Moçambique (UCM) (Beira, Mozambique)

Vibrações, a youth-friendly sexual and reproductive health website, went live on February 14th, 2022! Since that time the website and Facebook (https://www.vibracoes.co.mz/) had over 30.000 visitors. Vibrações serves as a reliable source of information on SRHR-related topics. The website allows for a unique opportunity to not only offer relevant and youth-friendly content and resources, but also to improve the reach and quality of counseling services, and connect the website to



other (online) help tools for young people. Furthermore, as Vibrações is available on the screens of mobile devices too, young people can be reached wherever and whenever they are. Behind the scenes of the website, numerous activities took place. As the creation, implementation, and maintenance of the website will be fulfilled by UCM and Coalizão, staff from each organization received training. Examples of training are intervention mapping (= a protocol that systematically addresses the planning and evaluation of a health promotion program), target group research, technical training, content creation, usability research, and online promotion. All to ensure high-quality information fitted to the needs of young people. The staff goes beyond to make the website successful while doing also something for their communities. They are visiting youth-friendly health centers to introduce the website and communities for those young people with limited access to the internet.

Uganda

Project: MHM++: Bringing Sexual Reproductive Health and Rights to life in Menstrual Health Management trainings in Uganda

Lead Organization: SHE Collaborates

Funded by: Nuffic TMT

Project Duration: June 2021 – March 2023

Project Manager: Yoka Cerfontaine

Partners:

Simavi Netherlands Sexual and Reproductive Health and Rights (SRHR) Alliance Uganda and Water and Sanitation Hygiene (WASH) Alliance Uganda

This project concerns strengthening the capacity of Master Trainers of the Ugandan partners to better equip teachers, community level trainers and government officials with integrated knowledge about Menstrual Health Management (MHM), SRHR and WASH and interactive/engaging training skills to deliver comprehensive MHM to adolescents (both girls and boys), young women and men and their communities.

In 2022, we organized a number of activities like F2F co-creation workshops with the Master Trainers in Uganda to redesign the MHM manual from the Ministry of Education and Sports (MoES), integrating SRHR, and WASH topics. In this process, the Master trainers acquired integrated knowledge and new interactive and engaging facilitation/training skills. Besides redesigning the MHM manual, we developed a supporting MHM toolbox with facilitation guides and piloted this in several communities. Master trainers cascaded several modules from the redesigned MHM in their own programmes. These cascading activities contribute to a better knowledge and understanding about MHM, SRHR and WASH among girls and boys,

young women and men and their communities. This will have a positive effect on sexual and reproductive rights, gender equality and the (economic) empowerment of women in Uganda.

Iraq

Project: Improving education and employment prospects of vulnerable youth in Iraq through blended and virtual education

Lead organization: SHE Collaborates
Funded by: Nuffic OKP (OKP-TMT+.20/00100)
Project Duration: September 2020 – March 2023
Project Manager: Mohammed Meziani/Joyce Grul

Partners:

Luminus Technical University College (LTUC) (Amman, Jordan) University of Fallujah (Fallujah, Iraq) Cihan University (Erbil, Iraq) Al Mansour University College (Baghdad, Iraq)

This project "Improved education and employment prospects of vulnerable youth in Iraq through blended and virtual education" started in September 2020. It is focused on removing barriers for refugees and Internally Displaced People (IDPs) during the entire student journey, from enrolment to employment. Due to conflict, protests, and COVID-19, many young people in Iraq (still) suffer from a lack of access to

education. Especially higher education institutes in or close to conflict areas suffer from damaged infrastructure and structural insecurity. This applies to all three participating Universities in Iraq. Together with LTUC, SHE-C provides tailor-made training to administrative and teaching staff to increase their skills in (organizing) blended and virtual education, while addressing the needs of vulnerable youth. The training is linked to three stages of the student journey. Stage 1; Access to quality education, Stage 2; Ouality of the education provision, and Stage 3; Link to the labor market. Thus in Iraq, where stability is scarce and face-to-face education cannot be guaranteed, virtual education can reduce the barrier for youth to access education and improve their employability. By building the capacity of higher education institutes and their teachers and facilities to offer virtual education we contribute to guaranteeing access to education for youth in periods of turmoil.

New projects in 2022

Suriname

Project: Reduction in SDG 3 through professional development of midwives in their role as midwife trainers

Lead organization: SHE Collaborates Funded by: Nuffic OKP (OKP-TMT+.21/00050) Project Duration: September 2021 – March 2023

Project Manager: Geraldine Beaujean



Partners:

Centrale Opleiding voor Verloskundigen in Suriname (COVS)

Association of Midwives Suriname St. Vicentius Hospital Paramaribo Zuyd University of Applied Sciences, Midwifery Education & Studies Maastricht BUKU, Groningen

This project started in September 2021, however due to Covid-19 travelling was not an option. The Surinamese project management decided to wait with the implementation of the project till the travel ban would be lifted and the high pressure on health care would subside. Between March 2021 and February 2022 4 workshops were facilitated in Paramaribo with the aim to strengthen the 13 participating midwives via 4 teach-the-teacher courses to become qualified teachers. This will improve the current training programme for midwives and the programme will become less dependent on obstetricians for teaching the new cadre.

The workshop series focussed on 1. How to enable students to learn theory; 2. How to enable students to learn skills; 3. how to guide and assess students on the workplace and 4. Reflection on the participants' learning trajectory and how to share this with colleague midwives.

Sierra Leone

Project: Changing the narrative of health professions education in Sierra Leone

Lead organization: SHE Collaborates

Funded by: Cordaid

Project Duration: July 2022 - March 2023

Project Manager: Tchitula Teuns

Partners:

Cordaid

Universiteitsfonds Limburg / SWOL

Since 2012, SHE Collaborates (SHEC) has been working on various projects in Sierra Leone, with the aim of strengthening the educational knowledge and skills of teachers who teach at various institutes. Our most recent project started in 2022, with the University of Makeni (UNIMAK), for the development of a specialization track for Health Professions Education. In partnership with Cordaid, a spin-off project has now emerged from this collaboration, with the ambition to take health professions education in Sierra Leone to a higher level.

The kick-off for this new project was in July and its aim was to run a pilot first, which focuses on Health Professions Education training in the Northern Province. Eighteen participants representing four

institutes are now currently following this course, hosted by our current cooperation partner UNIMAK. After completion of this pilot year in March 2023, evaluation of the collaboration will take place with the aim to upscale this intervention, targeting more healthcare professionals and institutes in all four provinces in the years to come.

In addition, the University Fund Limburg selected this project, as one of the four projects for the Annual Fund Campaign 'For Each Other' 2022, to receive additional funding.

Denmark, Spain, Ireland, Belgium

Project: internsHips in futurE hospitALs (HEAL)

Lead organization: Odense University Hosptial (OUH), Denmark

Funded by: Erasmus+ (European Union)

Project Duration: March 2022 - November 2024

Project Manager: Emmaline Brouwer

Partners:

Odense University Hospital (Odense, Denmark)
University of Southern Denmark (Odense, Denmark)

Germans Trias I Pujol Research Institute (Barcelona, Spain) Haute Ecole Libre Mosane University College (Liège, Belgium) Trinity College Dublin (Dublin, Ireland)

The objective of the HEAL project is to develop, test and propose an innovative framework for high quality internship, that shows the direction for how traditional internships in hospitals can be combined with other innovative learning and teaching methods. The HEAL project will provide practical and evidence based tips and good practice examples, as well as more policy oriented recommendations on how co-creation and internships based on blended learning can become an official part of future education programs for future health care professionals.

The HEAL project is designed with an action research approach, ensuring a close dialogue and collaboration with the end users, being medicine and nursing students as well as medical doctors and nurses within university hospitals, who have a responsibility for providing practical learning, while the students are in internship.



FUTURE OF SHE

The activities and output presented in this Annual Report 2022 show the diverse ways in which SHE makes an impact on the education of healthcare workers worldwide. Our impact is recognized in both qualitative and quantitative evaluations. We will continue to make a difference in health professions education through the connection of research, education and innovation.

In the short term, we are investing in our people and our activities guided by our strategic priorities and recommendations from the mid-term review in 2021. SHE is attracting new people, in part due to retirements of some long-serving staff. We are ensuring that new and diverse perspectives add to the realization of our shared goals.

In the long term, SHE will invest in strengthening the synergy between its three core activity domains; SHE Research, SHE Collaborates, SHE Educates. A further development of the research programme has started in 2022. That will enable choices on topics that need additional attention to further improve HPE. Building on our ongoing investment in a healthy academic culture, research ethics, and an open and inclusive workplace we have the foundation for impactful research and innovation in the domain of health professions education. We are connecting theory to research and practice and we are doing that on a local, national and global level. This is our recipe for research that matters.









