

# iMERR year report 2020

## Introduction

The COVID-19 pandemic had profound implications in the way we worked in 2020 but did not seem to have diminished our production in terms of number of publications and quality of our research. Apparently, we have been able to adjust to the situation without major losses, but the pandemic affected several research projects. Some were altered in order to keep progression in collecting data. Others had to wait until the number of infected people subsided somewhat. PhD students who have clinical duties were frequently overburdened and have faced obstacles to continue with their research. The self-evaluation of the quality of the research of our institute was delayed and hopefully will be completed in 2021. This year report is somewhat different from previous reports. It only contains new developments within 2020 such as publications, grants, new PhD projects etc. All other information can be found [on our website](#) in previous year reports.

## Publications

Bogomolova K, van der Ham IJM, Dankbaar MEW, van den Broek WW, Hovius SER, van der Hage J, Hierck B. The Effect of Stereoscopic Augmented Reality Visualization on Learning Anatomy and the Modifying Effect of Visual-Spatial Abilities: A Double-Center Randomized Controlled Trial. *Anat Sci Educ.* 2020;13(5):558-567. doi: <https://doi.org/10.1002/ase.1941>

Kickert R, Meeuwisse M, Arends LR, Prinzie P, Stegers-Jager KM. Assessment policies and academic progress: differences in performance and selection for progress. *Assess Eval High Educ.* 2020;44:1177-1190. doi: <https://doi.org/10.1080/02602938.2020.1845607>

Koh YYJ, Schmidt HG, Low-Beer N, Rotgans JI. Team-Based Learning Analytics: An Empirical Case Study. *Acad Med.* 2020;95(6):872-878. doi: <https://doi.org/10.1097/acm.0000000000003157>

Mamede S, Carvalho-Filho MA, Faria RMD, Franci D, Nunes MPT, Ribeiro LMC, Biegelmeyer J, Zwaan L, Schmidt HG. 'Immunising' physicians against availability bias in diagnostic reasoning: a randomised controlled experiment. *BMJ Qual Saf.* 2020;29(7):550-559. doi: <https://doi.org/10.1136/bmjqs-2019-010079>

Schmidt HG, Mamede S. How cognitive psychology changed the face of medical education research. *Adv Health Sci Educ.* 2020;25(5):1025-1043. doi: 10.1007/s10459-020-10011-0.

Mamede S. What does research on clinical reasoning have to say to clinical teachers. *Sci Med.* 2020;30(1):e-37350. DOI: 10.15448/1980-6108.2020.1.37350

Mamede S, Hautz WE, Berendonk C, Hautz SC, Sauter TC, Rotgans J, Zwaan L, Schmidt HG. Think Twice: Effects on Diagnostic Accuracy of Returning to the Case to Reflect Upon the Initial Diagnosis. *Acad Med.* 2020;95(8):1223-1229. doi: <https://doi.org/10.1097/acm.0000000000003153>

Mogali SR, Rotgans IJ, Rosby L, Ferenczi MA, Beer N. Summative and Formative Style Anatomy Practical Examinations: Do They Have Impact on Students' Performance and Drive for Learning? *Anat Sci Educ.* 2020;13(5):581-590. doi: <https://doi.org/10.1002/ase.1931>

Monteiro SD, Sherbino J, Schmidt HG, Mamede S, Ilgen J, Norman G. It's the destination: diagnostic accuracy and reasoning. *Adv Health Sci Educ.* 2020;25(1):19-29. doi: <https://doi.org/10.1007/s10459-019-09903-7>

Nazari T, van de Graaf FW, Dankbaar MEW, Lange JF, van Merriënboer JJG, Wiggers T. One Step at a Time: Step by Step Versus Continuous Video-Based Learning to Prepare Medical Students for Performing Surgical Procedures. *J Surg Educ.* 2020;77(4):779-787. doi: <https://doi.org/10.1016/j.jsurg.2020.02.020>

Stegers-Jager KM, Savas M, Van der Waal J, van Rossum EFC, Woltman AM. Gender-specific effects of raising Year1 standards on medical students' academic performance and stress levels. *Med Educ.* 2020;54(6):538-546. doi: 10.1111/medu.14068.

Nazari T, Zeb M, Dankbaar MEW, Lange JF, van Merriënboer JJG, Wiggers T, Farley D. Continuous versus step by step training for learning surgical anatomy on an open inguinal hernia model. *J Surg Surgical Res.* 2020; 5(2):97-102. DOI: 10.17352/2455-2968.000082

Zwaan L, Singh H. Diagnostic error in hospitals: Finding forests not just the big trees. *BMJ Qual Saf.* 2020;29(12):961-964. doi: <https://doi.org/10.1136/bmjqs-2020-011099>

Kuhn J, van den Berg P, Mamede S, Zwaan L, Diemers A, Bindels P, van Gog T. Can We Teach Reflective Reasoning in General-Practice Training Through Example-Based Learning and Learning by Doing? *Health Prof Educ.* 2020;6(4):506-515. <https://doi.org/10.1016/j.hpe.2020.07.004>.

## Dissertations

Al Rumayyan, A.R. (August 27, 2020). Developing Clinical Competence: Studies in Professionalism and Diagnostic Reasoning. EUR Promotor: Prof.dr. H.G. Schmidt ; Co-promotor: Dr. S. Mamede.

Kickert, R. (December 4, 2020). Raising the bar. Higher education students' sensitivity to the assessment policy, EUR. Promotor: Prof.dr. L.R. Arendts; Prof.dr. P. Prinzie; Co-promotor: Dr. K. Stegers-Jager; Dr. M. Meeuwisse.

## Societal impact

- Article in Science Guide (<https://www.scienceguide.nl/2020/02/van-een-verhoogd-bsaprofitieren-vooral-mannen-vrouwen-ervaren-hinder/>) + interview BNR radio about research on stricter academic policy and relation with academic performance and student wellbeing.
- Interview to Eric Boodman about our research on reasoning flaws and diagnostic errors reported on in the article “How the psychology of a \$4.99 price tag might influence who undergoes heart surgery”, published on [www.statnews.com](http://www.statnews.com) on 19 February 2020. StatNews is an American health-oriented news website aimed at disseminating scientific findings to lay people, produced by Boston Globe Medica, headquartered in Boston.
- Contribution to article: De Campus in lockdown: “Het was een verschrikkelijke chaos” in Erasmus Magazine 25 augustus 2020. De campus in lockdown: 'Het was een verschrikkelijke chaos' - Erasmus Magazine
- Stegers-Jager KM, Cleutjens K. Decentrale selectie is zo slecht nog niet. Medisch Contact. 2020;34/35:36-7.

## Research Quality, Prizes and Honours

The article by Mamede and colleagues on an educational intervention to immunize physicians against bias in diagnostic reasoning has been selected by the editors of BMJ Quality & Safety as one of the Top 10 articles published in 2020 (<https://blogs.bmj.com/qualitysafety/2021/03/14/introducing-the-top-articles-of-2020/>).

NVMO Beste Onderzoekspaper Vera Broks “Verborgen in het zicht: wisselende effecten van een hogere prestatienorm op studievoortgang van verschillende groepen geneeskundestudenten”