Fostering student learning through research integration into teaching in the Health Sciences
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Our studies are based on the assumption that teachers should explicitly express research in their undergraduate teaching. In, for example, courses and student research projects disciplinary research is made visible and approachable for students. Therefore, student perceptions of research in teaching are emphasized as they play an important role in fostering student learning outcomes. Integrating research in teaching is challenging for teachers, particularly in the earlier years of undergraduate education. First, students do not always recognise research activities or may lack the disciplinary framework to engage in research. Second, undergraduates may feel excluded from direct involvement in research and also report negative effects on integration of research in teaching. Students also perceive staff overcoming their own challenges in dealing with teaching and research responsibilities. In our studies research integrated into teaching is studied by focusing on student perceptions of teaching, desirable learning outcomes and research supervision practices. In our studies we build upon Healey’s framework to describe research integration into higher education, suggesting there is no single best way to integrate research in teaching.

Ways in which research is integrated into teaching may depend on discipline-specific characteristics, such as organizational factors within departments, the structure of knowledge and shared conceptions of research and knowledge within disciplines. Medicine is an example of an hard-applied discipline in which research skills and attitudes are important in clinical practice, especially for physicians to stay abreast of advances in the field. Medicine provides a context to improve our understanding of relationships between student perceptions of research in teaching and student learning outcomes and provides in-depth insights into supervisors’ practices in supervising student research projects.

In three large-scale studies first-year and third-year medical students’ perceptions of research integration are studied using questionnaires. Our findings suggest that ways in which students perceive research in teaching are related to each other, also in medicine. Student motivation for research in teaching is strongly related to familiarity with current research and beliefs about the value of research for learning as well as future practice. In addition, we found that strengthening research integration in undergraduate medical teaching is feasible in a limited amount of curriculum time, and can lead to enhanced student perceptions and learning outcomes –in particular- performance on a national progress test and written research reports in a local student research project. In a small scale qualitative study research supervision practices are studied using stimulated recall interviews. In this study five practices were found that aimed to encourage student learning: 1) fostering student motivation, 2) giving directions, 3) promoting knowledge construction, 4) thinking along and 5) creating research awareness. Furthermore, in this study relationships are explored between supervisors’ dilemmas and practices aiming to promote student learning in practice. Overall, our...
studies will inform curriculum decisions and supervision practices aiming to promote student learning in a context in which research, teaching and learning are closely related. Still, closer investigations of student experiences with research in teaching can contribute to in-depth understanding of research integration practices.

Biography
Mayke Vereijken holds a degree in Educational Science from the Radboud University in Nijmegen, the Netherlands. Before beginning her PhD she has worked as an educational advisor at the Leiden University Medical Center (LUMC). From 2013, she works as a PhD-student at ICLON, Leiden University Graduate School of Teaching. In the summer of 2017 she will complete her thesis. Supervisors in her research project are prof. Jan van Driel, full professor in Science Education and permanently employed at the University of Melbourne, prof. Friedo Dekker, full professor in Undergraduate Research in Medical Education at LUMC and Roeland van der Rijst, PhD., assistant professor in Higher Education at ICLON. Her research interests are teaching and learning in relation to the teaching-research nexus within university and medical education. Recently, she is gaining interest in students’ conceptions of research. She would like to share ideas about common interests with colleagues in Melbourne, Canberra and Sydney to explore future directions for research and practice.