

4TU.AMI Conference "Mathematics Education: the next decade and beyond"

Paul Drijvers (Utrecht University)

Trends and topics in next decade's mathematics education

ABSTRACT

In the first part of the lecture, we will briefly address the current trends in mathematics teaching and learning in both secondary and higher education, which can be summarized through key words higher-order thinking, digital technology, and personalized learning. Next, we will present the case of an introductory university statistics course, in which two types of automated feedback were implemented. First, students could consult an inspectable student model, that provided an overview of the student's current understanding of important topics in the domain of statistics. Second, students received stepwise feedback in tasks on hypothesis testing, which addressed the structure of hypothesis tests and the relations between steps. We will discuss didactical considerations that played a role in the design of both feedback types, as well as effects we found on the study behavior of the students.

CV

Paul Drijvers is a full professor in mathematics education at the Freudenthal Institute of Utrecht University's Science Faculty and at HU University of Applied Sciences Utrecht. His research interests include the role of ICT in mathematics education, curriculum development, assessment, pre- and inservice teacher training. <u>https://www.uu.nl/staff/phmdrijvers</u>

Sietske Tacoma is a PhD-candidate at the Freudenthal Institute of Utrecht University's Science Faculty. Her PhD research focuses on automated feedback in university statistics education. Furthermore, she is one of the developers of the Digital Mathematics Environment, an online learning environment for mathematics at all educational levels. <u>https://www.uu.nl/staff/sgtacoma</u>

 Prof. Dr. Paul Drijvers
 Professor in Mathematics Education
 Freudenthal Institute
 Faculty of Science

 Utrecht University
 Princetonplein 5, office 365
 PO Box 85170, 3508 AD Utrecht
 (030) 2535668
 p.drijvers@uu.nl
 www.uu.nl/Staff/PHMDrijvers