

Towards coherence in STEM education: Consequences for design

Harrie Eijkelhof

Freudenthal Institute for Science and Mathematics Education

Utrecht University

The Netherlands

It has long been argued that teaching separate sciences (such as physics, chemistry, biology and mathematics) does not assist students in understanding the real world nor prepare them for a career in interdisciplinary research. At the same time several factors hamper more coherent education and stakeholders seem to clash in views on this issue. Recently, developments in the field of international assessment (PISA), the revision of standards (in the US and elsewhere) and innovative curricula (NLT in the Netherlands) seem to offer opportunities for new ways of coherent education. In the presentation these developments will be outlined and evaluated, and some design principles for coherent math and science education will be suggested.