

## **The Swiss experience with TIMSS, PISA, HarmoS and their psychometric models**

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The presentation first addresses the strong impact that international studies such as TIMSS and PISA have had on educational research and its relation to policy making in Switzerland with its three language regions. This relation is problematic in that the studies' scientifically provable results often do not meet the high expectancies of policy makers. The limitations of the studies are more linked to their general design than to the specific psychometric model used. However, one Swiss analysis of TIMSS Science subscales revealed the one-dimensional competence model of TIMSS as inappropriate.

HarmoS is a Swiss project aiming at establishing national educational standards in four school subjects. Each of these standards has to be measurable and anchored in a comprehensive competence model. The HarmoS project's objective is to validate these competence models in the process of developing the standards. To this end, representative samples of grade 6 and 9 students were surveyed, based on a methodology similar to the PISA approach. HarmoS, as an autonomous national project, is directly confronted with each methodological step of such a survey. The presentation outlines the general procedures, including test design, scaling, and analysis. It then discusses to what extent competence models can be validated by this process.