# Work package 9 Indicators, instruments and measurement for innovative methods in science education

**Objective:**

To support all project activities demonstrating impact on the topics identified by the Call, and to provide instruments and methods that can be used formatively in science education wherever possible.

**Description of work**
The aim of WP9, led by Technische Universität München, TUM School of Education (TUM), is to complement the other WPs, by providing instruments, indicators and methods by which the success of the project actions can be measured.
WP9 will:

- Identify indicators for pupil attitudes and motivation in science, and scientific literacy.
- Identify instruments to measure the efficiency and efficacy of existing science teaching practices and of innovative methods, for use by students, teachers and teacher educators
- Carry out quantitative and qualitative analyses to monitor the success of project deliverables
- Promote the formative application of the above indicators and instruments
- Identify ways of measuring collaboration between teachers in science education

WP9 plays an essential role in assuring the scientific and technical quality of the project. Furthermore, WP9 aims to provide knowledge and tools that will be useful to science teachers and teacher educators in the formative assessment of practice, including the perspective of students in science classrooms. In order to accomplish the objectives of WP9, national and international instruments with regard to student, teacher and teacher educator's perspectives on science teaching will be reviewed. Priority will be given to existing instruments such as PISA 2006, which was focused on science. With instruments from PISA 2006 it will be possible to assess pupil attitudes and interest with regard to science, scientific literacy and science teaching practices and innovative methods. Furthermore, PISA 2006 offers the possibility of comparing S-TEAM activities with the baseline of each country. International instruments from PISA 2006 will be complemented by national instruments, and instruments targeting specific foci of S-TEAM.

**Sub-packages**
**WP9a: Formative instruments for pupil and teacher views on science education**
WP9a (UnivStrath) will collaborate on the dissemination of formative instruments for pupil and teacher views on innovative methods in science. (product 9.5)

**Instruments and Reports:**

**a)** ***Questionnaire: Dissemination Activities of S-TEAM***

The questionnaire is part of the formative assessment activities of S-TEAM. We developed it to gain information about your ways to disseminate S-TEAM ideas across Europe.

Answering the questionnaire will approximately take five minutes.

You can download the questionnaire and the covering letter here:

Link: covering letter

Link: questionnaire

**b)** ***Statistical information about activities, workshops, conferences etc.***

If you or a partner of your work package is conducting a workshop etc. please use the following table to share information about it. It will help gaining data about the dissemination radius of S-TEAM.

You can download it here

**c)** ***Baseline Report and Indicators Review for Science Teaching Methods and Attitudes in the Context of S-TEAM***

You can download the report here

**d)** ***WP9 timeline***

Alexander Gröschner has added a useful WP9 timeline in pdf format here. The idea of the timeline is to develop a relationship between products /deliverables of WPs 2-8 and those of WP9, i.e. the relevant evaluation forms, surveys etc. The timeline is also available as docx or as xlsx.

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