

**EXPLORING A ROSE-GARDEN**  
**Norwegian youth's orientations towards science**  
**– seen as signs of late modern identities**

Based on ROSE (The Relevance of Science Education), a comparative study  
of 15 year old students' perceptions of science and science education

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The thesis is based on the view that science teaching must build on an understanding of the students' culture, priorities and concerns.

The empirical material is collected through the ROSE project. ROSE (The Relevance of Science Education) is a comparative project meant to shed light on affective factors of importance to the learning of science and technology. The target population is students towards the end of lower secondary school (age 15). The research instrument was developed in cooperation with an international group of science educators. The resulting instrument was a questionnaire, mostly consisting of closed questions addressing the students' interests, attitudes, plans, views on the environmental challenges, etc. This thesis uses data from more than 26 000 students in 25 countries in Europe, Africa, Asia and South America.

The research aims were to develop a student typology based on the Norwegian data, to characterise the student types' orientations towards science, and to study Norwegian youth's interests against a background of students from less modernised countries. The results are discussed in the light of sociological theories on youth in late modern societies, especially by drawing on perspectives on the late modern project of identity construction.

The data analysis applies multivariate methods, and has an explorative and data-driven approach: The next step of the analysis has been successively adjusted according to the results from the previous step.

The results can be summarised under three main conclusions:

- Norwegian students can be divided into five student types with distinct orientations towards science.
- Students' interests in science are sex-specific.
- There are characteristic cross-national patterns in youth's interests that follow a modern-traditional divide.

The underlying purpose of the research is to promote a science education that aims to empower students to make a better world, and make students see themselves as actors, not onlookers. The last section discusses how sociological perspectives on modern youth can inform the area of science education and how science teachers can use the youth culture as a teaching resource for making the students more actively engaged.