

## Students' types of interest in physics

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Given the central importance of increasing students' interest as a goal of physics education, empirical support for the theoretical description of interest is essential. Our research project investigates which aspects of physics students are interested in and whether they can be categorised into different types of interest based on their interest profiles and their physics-related self-concept. We conducted a cross-cohort online study with students aged 14 to 16 years from Austria, Germany, and Switzerland (N=1219). Mixed Rasch analysis revealed that most students can be categorised into one single type of interest in physics. Moreover, we introduced the 'hierarchy of students' levels of interest in physics' (HOLIP) which provides a concise overview of how interesting different contexts (i.e. storylines), in which physics content may be set, are relative to each other. For example, the most interesting contexts are related to one's own body (e.g., medical diagnostics), socio-scientific issues (e.g., smuggled arms), or existential questions of humankind (e.g., big bang theory). Knowing this hierarchy of levels of interest in physics (HOLIP) is important for educators trying to increase their students' interests because it will enable them to match the design of their learning activities with their students' interests.

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