POSTER M 35
University teachers' conceptual understanding of thermodynamics: Common or incommensurable?
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In "applied science" education students are often introduced to a number of "basic science" subjects during the first two years of study, in order to allow the applied science teachers to utilize students' understanding of the basic science subjects later in the study. It is, however, often recorded that students do not recognise the basic science concepts and methods when used in applied science courses. The hypothesis of this study is that some of the scientific entities introduced in basic science courses actually constitute boundary objects between the basic science community and the applied science communities. We characterise the different understandings of the boundary object "The First Law of Thermodynamics" with a physicist, a mechanical engineer and a chemical engineer by analysis of semi-structured in-dept interviews. The structure of the interviews is based on the different introductions presented in the text books used by the three teachers.

MOTIVATION AND EMOTION

Discussants: Simone Volet, Murdoch University, Western Australia (posters 36-43) and Reinhard Pekrun, University of Munich, Germany (posters 44-51)

POSTER M 36
The impact of motivation on the use of information and communication technologies: The case of 6987 student teachers during their field practice
Thierry Karsenti, University of Montreal, Canada
Gilles Thibert, University of Montreal, Canada
StephaneVilleneuve, University of Montreal, Canada
Catherine Bertrand, University of Montreal, Canada

The arrival of new technologies in many classrooms currently appears to be one of the great focuses of teacher training programs and education reforms in Canada. The goal of this study was to understand the impact of motivation on the use of ICTs by student teachers during their practicum. The study consisted of a questionnaire –composed of several validated scales, including a motivation scale based on Deci and Ryan's (1991, 2000) motivation theory– administered to 6987 Quebec (Canada) prospective teachers. Statistical correlations among students' motivation scores for the five subscales and use of ICTs reveal, among other things, that the types of motivation reflecting a high self-determination and perception of competence are strongly and positively related to use of ICTs. In line with other recent studies, our results show that psychological factors –such as motivation– play a significant role in the use of ICTs by student teachers during their practicum.

POSTER M 37
The psychopathology and motivation of psychology students
Jan Lister, University of Sunderland, United Kingdom
Elaine Harbron, University of Sunderland, United Kingdom
Owen Rountree, University of Sunderland, United Kingdom