



Contribution ID: 72

Type: Oral Presentation

CONCEPTS IN CONTEXT

Friday, 5 October 2018 08:30 (20 minutes)

This talk will critique the notions of “concept”, “context” and “transfer”; presenting both experimental data and theoretical argument which comprised the core of my PhD research. These notions are fundamental in educational discourse, yet they are often taken for granted. A common implicit metaphor is that a concept sits in a context, like a solid object in a surrounding environment. I will argue that this metaphor is both indispensable and problematic. Student understanding of the concepts of “subtraction”, “vector addition” and “density” will be discussed, including experimental data from my PhD. The theoretical perspectives of “Knowledge in Pieces” and “Cognitive Resources” will be suggested as excellent tools for the explication of the observed sensitivity to context. “Embodied cognition” will also be briefly introduced as a useful interpretative tool for particular data. In sum, I will argue that robust educational research requires a thorough interrogation of the question: “When I speak of a particular concept, what exactly is this “thing” I am referring to?”

Apply to be considered for a student award (Yes / No)?

No

Level for award (Hons, MSc, PhD, N/A)?

N/A

Primary author: Dr SOUTHEY, Philip (Stellenbosch University)

Presenter: Dr SOUTHEY, Philip (Stellenbosch University)

Session Classification: Parallel Session 2

Track Classification: Track D - Teaching and Learning of Physics Concepts