



Contribution ID: 84

Type: Oral Presentation

## The case for using diagrams to navigate between multiple representations in physics in order to improve conceptual understanding

Wednesday, 5 July 2023 10:00 (20 minutes)

Through an interpretation of Greeno's model of the domains of problem-solving and the application of the theory of cognitive load, this paper shows why linking representations through a model aids understanding. The use of a drawing can help physics students to translate more easily between the abstract, concrete and symbolic representations of a physics problem. Physics teachers may find that an awareness of these theoretical underpinnings and their importance in assisting movement between representations informs the way in which they scaffold learning activities.

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

No

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

N/A

**Primary authors:** Mrs COBBING, Kate (Rhodes University); Mrs SEWRY, Joyce (Rhodes University); WILLIAMS, Jennifer (Rhodes University)

**Presenter:** WILLIAMS, Jennifer (Rhodes University)

**Session Classification:** Physics for Development, Education and Outreach

**Track Classification:** Track E - Physics for Development, Education and Outreach