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Teaching students problem solving with the 'light bulb effect' cognitive diagrammatic representation

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Abstract content (Max 300 words) **Formatting** http://events.saip.org.za/getFile.py/target=_blank **Special chars**

A diagrammatical representation of the cognitive processes required for solving Physics problems is used to teach students in Physics I Major at the University of the Witwatersrand, about problem solving by empowering them metacognitively, with the aid of a cognitive process diagrammatic representation called 'the light bulb effect'. After a teaching session on 'the light bulb effect' students answer a questionnaire with a problem that is new to them, and then are invited to reflect on their cognitive processes by describing those processes in their own words and drawing a 'light bulb effect' diagram that represents their cognitive processes. The analysis of responses shows that the majority of students find it easy to describe their cognitive processes after the session and also that students find the session beneficial.

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