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The impact of the field model on pre-service students' qualitative understanding of basic DC circuits.

Monday, 26 July 2021 15:00 (15 minutes)

The electron transport model is one of the consensus models currently used to teach DC circuits worldwide. The model explains current in terms of the flow of electrons. Regardless of its frequent use in high schools to explain DC circuits, the model was ineffective in helping students to understand the topic of DC qualitatively. The electron transport model also fail to provide a complete and coherent account of how electrons are involved in the transportation and distribution of energy around the circuit. As an alternative to the electron transport model, the field model was used during intervention to teach DC circuits to pre-service teachers at the University of Johannesburg. The current study reports the impact of the field model on preservice students' qualitative understanding of DC circuits as measured by the international DIRECT concept test instrument.

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

Yes

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

Phd

Primary author: KHWANDA, Mphiriseni (UJ)

Presenter: KHWANDA, Mphiriseni (UJ)

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