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DESCRIPTION

As an international, multi-disciplinary, peer-refereed journal, Learning and Instruction provides a platform for the publication of the most advanced scientific research in the areas of learning, development, instruction and teaching. The journal welcomes original empirical investigations. The papers may represent a variety of theoretical perspectives and different methodological approaches. They may refer to any age level, from infants to adults and to a diversity of learning and instructional settings, from laboratory experiments to field studies. The major criteria in the review and the selection process concern the significance of the contribution to the area of learning and instruction, and the rigor of the study.

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*Learning and Instruction, volume 22, issue 1, 47-61*

• Students' misconceptions exist at different levels of representational complexity.

• They could be at the level of false beliefs, mental models, or ontological categories.

• To achieve conceptual change at mental model level, instruction should be at a holistic level.

• One way to do this is through analogical comparison of flawed self model and correct expert model.

• This leads to more robust conceptual change than instruction directed at false beliefs.

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