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International Learning:
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Presentation Abstract

Strand 5: Technology and International Learning	
Presenter	Transformation or Confirmation of Timeless Notions? Abstract
Faizah Abdul Rahman, Rosli Abdullah, Subaidah Asmin Department of Mathematics & Science Madrasah Al-Irsyad Al-Islamiah, Singapore 579711 faizah@irsyad.sg, rosli@irsyad.sg, subaidah@irsyad.sg	The Effects of Inquiry-Based Computer Simulation on Scientific Thinking and Conceptual Understanding among Elementary School Pupils The purpose of the study was to investigate the effects of inquiry-based computer simulation (IBCS) and heterogeneous-ability cooperative learning (HACL) on (a) scientific reasoning and (b) conceptual understanding among primary 6 pupils in Madrasah Al-



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Irsyad Al-Islamiah. A quasi-experimental method was applied in the study. The sample consisted of twenty-four 12 year olds were all randomly selected and assigned to treatment (IBCS & HACL). The results showed that pupils in the IBCS+HACL group significantly outperformed their counterparts in the HACL group in scientific thinking and conceptual understanding. The findings of this study suggest that the inquiry-based computer simulation with heterogeneous-ability cooperative learning method is effective in enhancing scientific reasoning and conceptual understanding for pupils of all reasoning abilities, and for maximum effectiveness, cooperative learning groups should be composed of pupils of heterogeneous abilities.