

Abstract Submitted
for the NWS08 Meeting of
The American Physical Society

Barriers to Learning? School, Beliefs, and Reasoning in Physics Education MICHELLE KLINGLER, BRIAN PYPER, BYU-Idaho — Prior research has shown that scientific reasoning skills (cognitive ability) and attitudes about science (affective beliefs) can significantly impact learning. Do students who have taken more advanced math and physics classes have better scientific reasoning skills and physics comprehension? Do these courses improve their attitudes about science learning and affect how much they can learn? Four different physics classes from Brigham Young University-Idaho are being studied by the BYU-I RISE (Research in Science Education) group through the administration of several surveys. Pretesting has shown that there might be correlation between the level of math that a student has taken and their ability to understand both physics and general science concepts. As yet no data support that having taken higher levels of physics classes improves scientific reasoning ability, conceptual understanding or attitudes towards science.

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Date submitted: 14 Apr 2008

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