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Conceptual or computational? Making sense of reading questions in an inverted statistics course.

Dewar, Jacqueline M. (ed.) et al., Doing the scholarship of teaching and learning in mathematics. Washington, DC: The Mathematical Association of America (MAA) (ISBN 978-0-88385-193-7/pbk; 978-1-61444-318-6/ebook). MAA Notes 83, 127-136 (2015).

Summary: In this chapter the author describes his project, trying to get students to read a mathematics textbook more effectively. His report discusses working with existing data, identifying patterns within qualitative data, and trying to approximate a control group experiment within a single course. He also obtained a surprising result that has implications for the teaching of conceptual and computational material in statistics courses. His project also illustrates the interplay between the What is? and What works? questions in the SoTL taxonomy.

Classification: D20 D45 C35 C55 K15 U25

Keywords: scholarship of teaching and learning; universities; educational research; statistics course; textbooks; understanding; readability; questioning; taxonomy; knowledge dimension; didactics of mathematics; educational diagnosis; analysis of learning outcomes; evaluation; teaching-learning processes; academic approach; professional development; peer review