

Method, not methods: Teaching a theory of applied statistics

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The first course in Statistics is often the last course. As such, the emphasis should be on imparting a relatively deep understanding of the method of statistics and not on delivering a collection of methods. But how is this to be achieved?

In this talk, I will report on the novel aspects of an introductory course developed by Jock Mackay and I at the University of Waterloo. The course was developed over several years and for more than 10 years served as the required first course in Statistics for all students in the Faculty of Mathematics (about 800-1000 students per year). To deliver this, we had to develop what others have called a "theory of applied statistics".

This talk gives a taste of what is fundamentally novel about this approach and summarizes our experience.