

### Understanding How Attendance and Other Factors Affect Student Success

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#### Abstract

Although attendance may not be a virtue, it is certainly a behaviour we would like to cultivate. Class attendance has been shown to improve grades and reduce mass practice or cramming (Rodgers, 2001; Shimoff and Catania, 2001; Cohen and Johnson, 2006, Lin and Chen, 2006; Massingham and Herrington, 2006; Credé, Roch, and Kieszczczynda, 2010; Fadelelmoula, 2018). However to establish whether attendance has a causal effect on performance, it is important to control for covariates such as motivation, conscientiousness, cognitive ability, study habits and autonomy. The data for this paper is from in Economics 1701: Observational Data Analysis, an introductory course on statistics and probability for use with observational data. Attendance and final grades were recorded for all registered students during the semester. This data was then supplemented by responses from a survey about student behaviours and characteristics. This work extends existing research by collecting a more detailed set of student characteristics including demographics, autonomous learner scores and study habits. Using this data it is possible to untangle the effect class attendance has on performance given that it is possible to control for other factors that might affect performance. While it is clear that attendance is correlated with performance (correlation coefficient is 0.5137), the reason for this is complex and difficult to untangle.