Knowledge of multivariate data analysis is clearly important for graduate students. Since graduate students are being trained to be both effective researchers and effective consumers of others’ research, they need to understand and critically evaluate statistical results in quantitative academically-oriented articles, as well as to use appropriate multivariate statistics in their own research.

If multivariate statistical analysis has been successfully taught in traditional brick n’ mortar classrooms, professors in online institutions ought to be able to deal with this material as well, although probably in somewhat different ways. Traditional institutions usually lean heavily not only on formal course work but also on “apprenticeships” of various forms where students learn applied data analysis by actually participating in academic research; which is less practical in the online context. New ways of structuring formal course work, developing students’ critical facilities, and helping them learn the craft of research as well as its mechanics have evolved in online universities.

Against this backdrop, this study discusses an online research method course for doctoral students at a regionally accredited online university. To make sure that these joint goals – effective use of statistics and effective critique of their use in the work of other researchers -- are met, a multivariate statistical analysis course needs to meet the following requirements:

1. Have practical relevance.
2. Provide students an opportunity to understand how the concepts they are learning can be applied in the real world.
3. Help students understand statistical results reported by the authors of articles they are asked to evaluate.
4. Develop increasingly complex analyses of real data, either self-generated or assembled by others, using sophisticated statistical packages (such as SPSS or SAS) to carry out the analyses, and explain the reasoning behind the solutions to the problems that they choose.
5. Encourage students by communicating what needs to be done to succeed in the course.

In summary, this study reviews the problems posed by an online university and describes the evolution of the particular solutions to these problems through course work, supervised study, and independent research. The study also shows that online universities can be quite as effective in teaching multivariate methods as traditional schools.