

University of Macau

Abstract

ANALYSIS OF VARIANCE AND ITS APPLICATIONS IN
MACAO EDUCATIONAL RESEARCHES

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In this thesis we study a series of statistical methods: ANOVA, ANCOVA and MANCOVA. They are the powerful and widely used statistical techniques in experimental behavioral science research. They can be used to analyze multivariate data. Knowledge of this technique will enable you to investigate and answer a vast array of research questions. This thesis focuses on educational researches. So we apply a real example in educational field in order to explain the manipulation of ANOVA, ANCOVA and MANOVA using SPSS for data analysis and presentation. This thesis has two goals. First, it introduces the mathematical principal of ANOVA, ANCOVA and MANCOVA. Second, it shows how data an analyzed by using a very popular statistical software SPSS where it is applied to studying real educational cases in Macao.