

Liverpool John Moores University

Title: RESEARCH METHODS AND STATISTICS IN PSYCHOLOGY
2: TESTING FOR DIFFERENCES
Status: Definitive
Code: **4505PSYSLI** (127492)
Version Start Date: 01-08-2021
Owning School/Faculty: Psychology
Teaching School/Faculty: Sri Lanka Institute of Information Technology

Team	Leader
Simon Cooper	Y

Academic Level: FHEQ4
Credit Value: 10
Total Delivered Hours: 32
Total Learning Hours: 100
Private Study: 68

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	10
Workshop	22

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	Portf	A portfolio containing a practical report and a results section.	100	

Aims

1. To introduce the tools for carrying out a literature search.
2. To develop an understanding of basic statistical concepts, descriptive statistics, *t*-tests, Mann-Whitney U test, Wilcoxon Matched Pairs, ANOVA, post-hoc testing.
3. To use SPSS to carry out statistical analyses.
4. To give practical experience of between subjects research methods.
5. To develop practical report writing skills.

Learning Outcomes

After completing the module the student should be able to:

- 1 Write a practical report conforming to APA style.
- 2 Employ the appropriate statistical test, and interpret its outcome.
- 3 Demonstrate a basic knowledge of the generic principles of research design statistical testing.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Portfolio	1	2	3
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Outline Syllabus

The module will explore different approaches to research design with a focus on the differences between testing for between and within-group differences, for example, t-test, Mann Whitney U test, Wilcoxon Matched Pairs, ANOVA and post-hoc tests using SPSS. Research report writing will be re-discussed with an emphasis on experimental designs. Advanced data processing (e.g. outlier analysis and transformation) will be discussed. Students will also gain experience of questionnaire design, and will develop understanding of ethical principles and procedures in research design.

Learning Activities

1. Attend lectures and workshops
2. Use SPSS statistical software
3. Use databases to find literature
4. Complete coursework tasks
5. Complete prescribed reading

Notes

This module provides students with a practical introduction to how to design an experiment, collect data in an ethical manner, perform statistical analysis and write up findings in a manner consistent with published material. Throughout the module students will be required to use computers to conduct literature searches and to perform statistical analysis. In the module students will be introduced to the basic principles of experimental research design, they will then learn more complex statistical tests for differences between two groups (t-test, Mann Whitney U test, Wilcoxon Matched pairs) and three groups (ANOVA). Students will also learn the basics of questionnaire design. Students will demonstrate their learning through the coursework task by writing a scientific practical report and an additional results

section. Both components together ensure both depth and breadth of understanding.