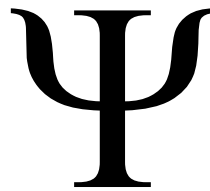


Ysgol Seicoleg
School of Psychology



BSc (Hons) Psychology
BA (Hons) Counselling Studies and Psychology

Module ECPS4002 Research Methods

Module Handbook

Module ECPS4002 Research Methods

Module Leader: Stacey Coleman

Contact Details:

Tel: 01792 482126

Email: stacey.coleman@uwtsd.ac.uk

Office: TA104a Psychology and Counselling building

This handbook has been designed to provide you with the necessary information required for your progression throughout the module. It is very important that you keep this in a safe place as it is your essential guide to module content and the learning outcomes required to complete the module.

Good luck with your studies. If you have any queries regarding this module, please contact the module leader.

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ECPS4002 Research Methods: Module Information

This is a Level 4 module and therefore is designed to provide you with the foundational skills which will be critical for future years of your degree programme. Through the Research Methods module you will develop your understanding of the concepts and principles of research design, ethics and statistical analysis. The skills you will learn in this module are absolutely essential in underpinning your progression throughout your degree.

Lectures for this module will introduce different types of research in psychology, as well as research design and ethics. Workshops will be more practically based and will allow you to practice techniques, use statistical packages to analyse data, and allow you to engage in peer discussions about the topics introduced within lectures.

It is essential that you do not miss any lectures or workshops for this module and that you have prepared adequately when it is required.

Module Requirements

MODULE CODE:	ECPS4002
TITLE:	Research Methods
MODULE LEADER:	Stacey Coleman
LEVEL:	4
SEMESTER:	2
CREDITS:	20

AIM(S)

The aims of this module are to:

- Introduce students to the academic, computer and study skills required for the course, including packages for statistical analyses;
- Explore principles of quantitative and qualitative research design and their appropriate application, taking into consideration ethical principles of research; and
- Provide a strong foundation for research-based modules and assessments in levels five and six.

LEARNING OUTCOMES

Upon the successful completion of this module, the student should be able to:

1. Demonstrate an understanding of appropriate conventions for academic writing in psychology;
2. Demonstrate an awareness of various qualitative and quantitative research methods and their applications;
3. Understand the principles of ethical research; and
4. Recognise and use appropriate methods of collecting, describing and analysing simple research data

Allocations of teaching to deliver the module are:

Activity type	Hours	Percentage
Scheduled learning: • Lectures = 20 hours • Workshops = 20 hours	40	20%
Independent learning	160	80%
Total	200	100%

Assessment

Learning Outcomes	Assessment Criteria <i>To achieve each outcome a student must demonstrate the ability to:</i>
1. Demonstrate understanding of appropriate conventions for academic writing in psychology	Write up empirical studies to the correct APA academic standards for Psychology
2. Demonstrate an awareness of various qualitative and quantitative research methods and their applications	Describe the strengths and limitations of different study designs as applied to different research questions
3. Understand the principles of ethical research	Describe the ethical issues associated with specific qualitative and quantitative research studies
4. Recognise and use appropriate methods of collecting, describing and analysing simple research data.	Collect appropriate qualitative and quantitative data and conduct basic data analysis.

This module will be assessed through four assessment components, each worth a specific percentage of your overall module mark.

1. Your first assessment will be a 1,500 word quantitative study report. You will be required to calculate and report simple data analysis (using a t-test analysis). (30%)
2. Your second assessment will be a second 1,500 word quantitative study report. This report will be focused on a correlation analysis and you will be analysing provided data. (30%)
3. A one hour open book exam will enable students to demonstrate an awareness of quantitative research design issues and associated ethical considerations, and to demonstrate the ability to carry out basis analyses that describe simple research data. (30%)
4. You are required to complete four hours of research participation and submit a 500 word reflective log that demonstrates your awareness of the research topics and studies you have experienced, including reference to their related ethical and design issues. (10%)

Please see the individual Assessment Proformas on the Research Methods Moodle page for specific information regarding the assessment questions, requirements, and submission deadlines.

For this module you must submit all four pieces of work for assessment and record a mark for each of the four elements of greater than zero, but to pass the module you required a combined mark of 40% or higher.

Module Core Text and Wider Reading

Essential Reading

- Brace, N., Kemp, R., & Snelgar, R. (2012). *SPSS for Psychologists*. (5th ed.). Hants: Palgrave Macmillan.
- Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press.
- Smyth, T. R. (2004). *The principles of writing in psychology*. Basingstoke: Palgrave Macmillan.

Wider Reading List

- APA (2010). *Publication manual of the American Psychological Association* (6th ed.). APA: Washington, DC.
- Beech J. R. (2008). *How to write in Psychology: A Student Guide*. Oxford: John Wiley & Sons.
- Beins, B.C., & Beins, A. M. (2012). *Effective writing in psychology: Papers, posters and presentations*. (2nd ed.). Oxford: Blackwell.
- Dancey, C., & Reidy, J. (2007). *Statistics without maths for psychology*. (4th ed.). London: Prentice Hall. (E-book also available.)
- Field, A., & Hole, G. (2003). *How to design and report experiments*. London: Sage.
- Harris, P. (2008). *Designing and reporting experiments in psychology*. (3rd ed.). Milton Keynes: Open University Press. (E-book also available.)
- Holt, N., & Walker, I (2009). *Research with people: theory, plans and practicals*. London: Palgrave Macmillan.
- Howitt, D., & Cramer, D. (2010). *Introduction to research methods in psychology* (3rd ed.). Harlow: Pearson Education.
- Howitt, D., & Cramer, D. (2010). *Introduction to statistics in psychology: A complete guide for students*. (5th ed.). Harlow: Pearson Education.

Lectures and Seminars

This is a Level 4 module and is intended to provide you with the foundational knowledge and skills that will be critical for future years of your degree programme.

This handbook clearly sets out the requirements for your individual learning and it is expected that students will engage in all readings set out for lecture and seminar preparation.

Readings

Readings and preparation for this module are set out in the Module Information section of this handbook and are essential. There are three core textbooks for this module that each have their own place in regards to the topics that will be covered throughout this module. There are multiple copies available in the Townhill library of each book. Some weeks will require you to engage with a chapter, or a number of chapters, from these books; please ensure you are aware of what is being covered each week and prepare accordingly.

Readings beyond the core texts for this module can be found through the University library system. When a reading is not widely available (e.g., a book chapter) it will be made available to you on the module Moodle site. However, journal articles that are freely available through the University system will not be made available on Moodle: you will need to retrieve them for yourself.

Lectures and seminars can only provide you with a scaffold of information – it is your wider reading that will help you to develop a comprehensive understanding of the topics discussed in. It is suggested that you carry out the essential readings as we go along as this will enhance your understanding of the overall topics. It is often best to consolidate your learning by reading the text again; not only will this help you learn it will give you the information to digest any information provided in the lecture/seminar in your own way.

This module has been structured in such a way that the readings and lectures/workshops are integrated; someone who has prepared by carrying out the reading, attending the lecture and then reviewed the material should develop a good understanding of the material. A student who attends the lecture but does not carry out any of the readings will, in all likelihood, struggle to even understand what is being talked about in the lecture; they certainly will not develop the knowledge that will be required at more advance levels of their degree.

Please note: Lectures will start promptly at 9:05am on Wednesdays. Late entry will only be permitted at points where the academic staff feel it is appropriate, as it is unfair on students who have arrived on time when their lecture is disrupted by late-attending students. Please note that no materials will be repeated for those arriving late.

At **Level 4** it is expected that students will demonstrate the following qualities:

- Be able to write in well-formed English sentences, paragraphs and essays so as to present arguments in a clear and effective manner.
- Be able to speak in a direct, coherent and effective fashion.
- Be able to find relevant information to inform written and oral communication.
- Understand how to gain information through the use of library facilities.
- Be able to work individually.
- Begin to understand the theoretical concepts behind the forms of knowledge encountered in their study.
- Understand the difference between, and relationship between, primary and secondary data.
- Be able to acquire computer and other IT skills.

The following pages set out the lecture structure for this module. This handbook and the associated Moodle folder should be used to keep track of what is being covered each week and what you are required to do to prepare for lectures and seminars each week.

Module Series Information

Date	Lecture Title	Workshop Topic	Preparation (Coolican, 2014)	Time Allocated
Weds 31 st Jan	Measuring People	Ethics	Ch. 1, 2 & 11	6 hours
Weds 7 th Feb	Experimental and Non-experimental Designs	Design issues in psychology	Ch. 3 & 5	4 hours
Weds 14 th Feb	Validity in Psychological Research	Psychological tests and measurement scales	Ch. 4 & 8	6 hours
Weds 21 st Feb	Organising Data	Introduction to SPSS	Ch. 13 & 15	6 hours
Weds 28 th Feb	Differences Between Samples	Data collection for REP30_1 Calculating t	Ch. 17	4 hours
Weds 7 th March	Significance Testing	Calculating t Representation data using graphs	Ch. 14 & 16	8 hours
Weds 14 th March	Introduction to Qualitative Research (1 hour) Interview/focus group practice (1 hour)	Tests for Categorical Variables (1 hour) Using SPSS (1 hour)	Ch. 10 & 18	6 hours
Weds 21 st March	Qualitative Research Methods	Qualitative Analysis	Ch. 10 & 12	6 hours
Weds 28 th March	Correlation	Correlation using SPSS	Ch. 19	4 hours
Easter Break				
Weds 25 th April	Revision session	Correlation using SPSS	Ch. 19	4 hours
Weds 2 nd May	Wrap up and Level 5 Expectations	No workshop	None	None

Suggested plan for Assessment One: T-test report		
Task	What it entails	Time assigned for task
Data collection	Participating in a task to collect data – you will then be provided with the data to conduct the appropriate analysis	This will take place during scheduled workshops
Topic readings	Reading related to the area of research; basic articles/books and more advanced specific journal articles	Basic reading = 8 hours Advanced reading = 4 hours

Report first draft	Write main sections of report; Introduction Method Results Discussion	6 hours
Data analysis	Simple descriptive statistical calculations; calculating and interpreting t	This will be practiced during workshops and will require an additional 3 hours of independent work
Report second draft	Check for coherence of each section of the report; add abstract	4 hours
Report final draft	Constructing the version that is to be submitted, complete with citations and full reference list in APA style	3 hours
Proofread and check	Proofread for structure and errors, check for correct formatting and presentation	2 hours
Total allocated to assessment = 30 hours		

Suggested plan for Assessment Two: Correlation report		
Task	What it entails	Time assigned for task
Topic readings	Reading related to the area of research; basic articles/books and more advanced specific journal articles	Basic reading = 8 hours Advanced reading = 4 hours
Report first draft	Write main sections of report; Introduction Method Results Discussion	6 hours
Data analysis	Enter data into SPSS; analyse data to report descriptive and inferential statistics	This will be practiced during workshops and will require an additional 4 hours of independent work
Report second draft	Check for coherence of each section of the report; add abstract	4 hours
Report final draft	Constructing the version that is to be submitted, complete with citations and full reference list in APA style	2 hours
Proofread and check	Proofread for structure and errors, check for correct formatting and presentation	2 hours
Total allocated to assessment = 30 hours		

Suggested plan for Assessment Three: Open Book Exam		
Task	What it entails	Time assigned for task
Revisiting information from lectures/workshops	Finding and reading information related to the topics covered throughout the semester	25 hours
Total allocated to assessment = 25 hours		

Suggested plan for Assessment Four: Reflective Log		
Task	What it entails	Time assigned for task
Completion of research credits	Taking part in psychology research studies as a participant	4 hours
Recording studies you have participated in	Making notes following each study you take part in; record details of study, design flaws and ethical considerations	Approximately 4 hours in total across semester
Consolidation of research design and ethics knowledge	Revisiting information delivered throughout the module and engaging with textbooks	4 hours
First draft of reflective log	Write up initial draft of reflection including details of a number of studies you have participated in	3 hours
Second draft	Refining reflection and including a solid conclusion	3 hours
Final draft of reflective log	Writing final version that will be submitted, complete with citations in the text and a full reference list in APA style	2 hours
Proofread and check	Proofread for structure and errors, check for correct formatting and presentation	1 hour
Total allocated to assessment = 21 hours		

Lecture One: Measuring People

During this first lecture you will be introduced to the requirements of the module, including attendance at lectures and workshops and the module assessments.

We will start to explore the nature of psychology as a science and assess the basic types of research methods and designs present in psychological research. We will be looking at types of variables, samples and assessing the difference between qualitative and quantitative research methods. Using a number of different examples, you will learn how research questions are developed and the importance of using operational definitions and representative samples in your research.

We will end the lecture with a final discussion on the quantitative/qualitative debate and you will be considering how we could begin to explore a number of research questions using each method.

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press **Chapter 2**

Additional Reading:

Holt, N., & Walker, I. (2009). *Research with people: theory, plans and practicals*. London: Palgrave Macmillan. **Chapters 1 & 2.**

Workshop 1: Ethics

This week you will be forming research ethics panels with your peers and will be required to critique a number of well-known psychological research studies in terms of the ethical issues that would be present if these studies were to be conducted today.

Lecture Two: Experimental and Non-Experimental Designs

This week we will begin by exploring the role, and features, of experiments and we will discuss the difference between relationships between variables and differences between conditions in experiments. You will be introduced to the strengths and weaknesses of using certain types of designs in experimental settings, for example, related versus unrelated designs.

We will then explore a number of non-experimental designs in psychological research and will discuss the difference between ‘true’ experiments and field experiments. We will end the lecture with a brief introduction to qualitative research methods such as interviews.

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press. **Chapters 3 & 5.**

Additional Reading:

Dancey, C., & Reidy, J. (2007). *Statistics without maths for psychology*. (4th ed.). London: Prentice Hall. (E-book also available.) **Chapters 3, 4 & 5**

Field, A., & Hole, G. (2003). *How to design and report experiments*. London: Sage. **Chapter 3.**

Harris, P. (2008). *Designing and reporting experiments in psychology*. (3rd ed.). Milton Keynes: Open University Press. (E-book also available.) **Chapter 10.**

Howitt, D., & Cramer, D. (2010). *Introduction to research methods in psychology* (3rd ed.). Harlow: Pearson Education.

Workshop 2: Design Issues in Psychology

This week you will be working in groups to discuss the strengths and weaknesses of a number of different designs that are commonly used in psychological research.

Lecture Three: Validity in Psychological Research

In this lecture you will be introduced to the concept of psychometric standards in psychological research. You will learn about the importance of validity in experimental settings and in qualitative research, and will also discuss the importance of choosing reliable and valid measures when conducting research using surveys, for example. To end the lecture we will be looking at how validity and reliability can be measured and you will continue this in today's workshop.

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press. **Chapters 4 & 8**

Additional Reading:

Howitt, D. (2010). *Introduction to qualitative measures in psychology*. Harlow: Prentice Hall. **Chapters 7 & 11**

Howitt, D., & Cramer, D. (2010). *Introduction to research methods in psychology* (3rd ed.). Harlow: Pearson Education. **Chapters 14 & 15.**

Workshop Three: Psychological Tests and Measurement Scales

During this week's workshop you will be completing a number of scales, tests and/or questionnaires in order to practice scoring of psychological scales. You will be introduced to the concept of measuring reliability and validity and we will discuss why standardisation is important when choosing a scale to use in research.

Lecture Four: Organising Data

In this lecture you will learn how we can begin to use statistics in psychology. You will be introduced to the different levels of measurement and different types of data that we can collect when we conduct quantitative research. We will look at how we can summarise a large amount of numbers/data and how we use measures of central tendency and dispersion to describe the sample we use in our research. You will learn the importance of using sample/descriptive statistics to describe samples based upon the data you have gathered and will be introduced to the concepts of normal distribution and standard deviation. We will end the lecture with a brief look at frequencies within larger sets of data.

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press. **Chapters 13 & 15**

Additional Reading:

Dancey, C., & Reidy, J. (2007). *Statistics without maths for psychology*. (4th ed.). London: Prentice Hall. (E-book also available.)

Howitt, D., & Cramer, D. (2010). *Introduction to statistics in psychology: A complete guide for students*. (5th ed.). Harlow: Pearson Education.

Workshop Four: Introduction to SPSS

In this workshop you will be introduced to the Statistical Package for the Social Sciences (SPSS); a form of software that we use in psychology to run statistical analyses on data. You will start to input simple descriptive data and will be shown how to run basic descriptive statistical tests.

Lecture Five: Differences Between Samples

In this lecture you will be discussing the differences between parametric and non-parametric statistics and considering WHY this difference is important for the statistical test that we choose to use to analyse any data we collect. You will be introduced to some of the basic assumptions of parametric testing plus the alternative criteria of non-parametric testing.

For the second half of this lecture we will be focusing on the t-test. There are two basic types of t-test that are commonly used to analyse quantitative data and you will learn why we would choose each of these tests and what they can (and can't) do. We will start to look at the statistical calculation for the t and you will be practicing this in today's workshop.

Essential Reading

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press. **Chapter 17**

Additional Reading

Howitt, D., & Cramer, D. (2010). *Introduction to statistics in psychology: A complete guide for students*. (5th ed.). Harlow: Pearson Education. **Chapters 6, 13, 14, 15 & 19.**

Workshop Five: Data Collection!

For the first half of this workshop you will be engaging in a small research study in order to collect data to complete your first report assessment for this module.

For the remainder of the session you will start to use 'dummy data' to practice calculating simple descriptive statistics and begin to work through calculating the t – this is required for you to infer statistical significance from the data you will be analysing (more on this next week!)

Lecture Six: Significance Testing

In this lecture you will learn more about the ways in which we can use statistics in psychology, moving away from descriptive statistics to developing an understanding of probability, hypothesis testing and inferential statistics. We will look at the difference between the experimental hypothesis and null hypothesis, and you will learn what we mean by aiming to ‘reject the null’. We will then move on to looking at level of significance, errors, and power within statistical testing.

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press. **Chapters 14 & 16**

Additional Reading:

Howitt, D., & Cramer, D. (2010). *Introduction to statistics in psychology: A complete guide for students*. (5th ed.). Harlow: Pearson Education. **Chapters 10, 16 & 17**

Workshop Six: Representation of Data Using Graphs

For the first part of this workshop we will continue with practicing calculating t .

For the remainder of the session you will be introduced to the different types of graphs that we can use to represent our data visually. You will be working in groups to decide which graph would be best to present different types of data.

Lecture Seven: Introduction to Qualitative Research and Interviewing Practice

For the first half of this lecture we will be exploring alternatives to the traditional scientific method in psychological research and debating the problem with quantification, and you will then be introduced to qualitative research methods. We will consider the role qualitative research has to play in psychology and explore a number of different qualitative methods, including interviews and focus groups.

For the second half of the session you will be engaging in practice of interviewing skills. You will be working to create your own research questions and using these to gather your 'data' from your peers.

For the remainder of the lecture

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press. **Chapters 10 & 18**

Additional Reading:

Howitt, D. (2010). *Introduction to qualitative methods in psychology*. Harlow: Prentice Hall. **Chapters 1 - 4**

Howitt, D., & Cramer, D. (2010). *Introduction to research methods in psychology*. (4th ed.). Harlow: Pearson Education. **Chapters 17 & 18**

Workshop Seven: Tests for Categorical Variables and Using SPSS

At the beginning of this workshop we will be looking at how we can use categorical variables in our research. You will be introduced to frequency tables and two types of non-parametric tests that are used exclusively for data that is categorical; the χ^2 for association and the χ^2 for goodness of fit. Finally you will be engaging in practical work using SPSS to analyse and present categorical data.

Lecture Eight: Qualitative Research Methods

We will continue to look at qualitative research methods this week and we will be exploring the effects of interpersonal variables when gathering and analysing qualitative data. You will then be introduced to the ways in which qualitative data may be analysed, specifically focusing on interview and focus group data (which are common methods of data collection employed for final year dissertations). We will end the lecture with a discussion about the reliability and validity of qualitative methods.

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press. **Chapter 10**

Additional Reading:

Howitt, D. (2010). *Introduction to qualitative methods in psychology*. Harlow: Prentice Hall. **Chapters 7 & 11**

Howitt, D., & Cramer, D. (2010). *Introduction to research methods in psychology*. (4th ed.). Harlow: Pearson Education. **Chapters 20 & 24**

Workshop Eight: Qualitative Analysis

For the entirety of this workshop you will be working through the steps of thematic analysis on a provided transcript. You are required to follow the steps of thematic analysis and attempt to analyse the information that has been presented from the data in the transcript. As part of a formative assessment for this module, this transcript will then be collected at the end of the session and feedback will be provided to each individual on the analysis you have conducted.

Lecture Nine: Correlation

During this week's lecture you will be introduced to the statistical analysis of correlation. We will be exploring the measurements and types of data that are required to be able to conduct this analysis and will discuss the types of correlation that can be used; Pearson's product-moment and Spearmans rho. We will revisit significance levels and put this into context of explaining the type of relationship we can have between the two variables being explored. We will end the lecture with a brief overview of the common uses of correlation tests and also discuss what we CAN'T assume when using a correlation analysis.

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press. **Chapter 19**

Workshop Nine: Correlation

This week we will be using SPSS to practice the correlation analysis and begin to look at how we interpret the results.

Lecture Ten: Revision Session

This week we will be using the lecture to revisit key areas covered throughout the module in preparation for your upcoming exam. You should use this lecture to clarify any issues you have, ask any questions and work with your peers to formulate a realistic plan for revising thoroughly for this exam.

Workshop Ten: Correlation

During this workshop we will continue to work on the correlation analysis, focusing on the interpretation and write up of a good results section.

Essential Reading:

Coolican, H. (2014). *Research methods and statistics in psychology*. (6th ed.). London: Psychology Press. **Chapter 19**

Lecture Eleven: Summary and looking ahead

As it is always good to look ahead, we will use the final session of this module (and of the first year of your degree) to start to consider your future studies, with emphasis on the research methods and analysis content you will encounter in year two.

Workshop:

There will be no workshops this week.