

# Unit Outline (Higher Education)

<b>Institute / School:</b>	Institute of Education, Arts & Community
<b>Unit Title:</b>	QUANTITATIVE RESEARCH METHODS IN EDUCATION
<b>Unit ID:</b>	EDMED7057
<b>Credit Points:</b>	15.00
<b>Prerequisite(s):</b>	Nil
<b>Co-requisite(s):</b>	Nil
<b>Exclusion(s):</b>	Nil
<b>ASCED:</b>	070303

## Description of the Unit:

This unit introduces students to the core quantitative research methodologies within educational research. At the end of the unit, students will be able to apply the processes involved in conducting quantitative and mixed methods research, in particular forming a hypothesis, selecting and justifying methods of data collection, analysis and interpretation, specifically data generated in the context of Australian education sectors. Core research methods covered include experimental and correlational research designs. Students will acquire an understanding of the use of statistics in research. Ethical considerations from initial data collection through to data analysis and transparency in reporting are emphasised and guidelines considered. Students will be able to identify and access existing statistical data sets relevant to educational research. They will understand the purpose of undertaking a literature review before commencing a research project, develop literature search skills and examine literature for its assumptions and biases. Student will learn about the peer review process – how it works and why it is important. Students will also develop their academic reading and writing ability to a graduate standard through critical reading of quantitative research in the field of education and writing tasks preparing them for their Professional Inquiry or Minor Thesis projects.

**Grade Scheme:** Graded (HD, D, C, P, MF, F, XF)

## Work Experience:

No work experience: Student is not undertaking work experience in industry.

**Placement Component:** No

**Supplementary Assessment:** Yes

Where supplementary assessment is available a student must have failed overall in the Unit but gained a final

mark of 45 per cent or above, has completed all major assessment tasks (including all sub-components where a task has multiple parts) as specified in the Unit Description and is not eligible for any other form of supplementary assessment

### CourseLevel:

Level of Unit in Course	AQF Level of Course					
	5	6	7	8	9	10
Introductory	■	■	■	■	■	■
Intermediate	■	■	■	■	✓	■
Advanced	■	■	■	■	■	■

### Learning Outcomes:

#### Knowledge:

- K1.** Examine and apply the conventions of academic reading and writing in quantitative educational research
- K2.** Distinguish how research questions and research designs are linked
- K3.** Connect data collection and types to their appropriate statistical analysis
- K4.** Prioritise ethical approaches in quantitative research with reference to published guidelines
- K5.** Evaluate research designs often used in educational research, e.g. correlational research, interventions with treatments, controls, instruments and model development

#### Skills:

- S1.** Analyse data using inferential and descriptive statistics, including evaluations of effect size
- S2.** Critically engage with existing bodies of knowledge in a specialist field of education
- S3.** Develop initial research skills, e.g. forming a hypothesis and research question, finding relevant research

#### Application of knowledge and skills:

- A1.** Read and write academically at a high level, e.g. on a research topic in a chosen area of educational specialisation
- A2.** Critically evaluate published research in a specialised field of education
- A3.** Collect data via a quantitative instrument (e.g. survey) and apply appropriate statistical analysis
- A4.** Analyse and present findings honestly and transparently

#### Unit Content:

Topics may include:

- The structure of research papers
- Academic reading and writing
- The relationship between research, theory and practice
- How to develop a 'researchable' question or topic
- When to choose a quantitative technique
- How to collect statistical data via surveys
- Sampling techniques
- Drawing conclusions from statistical analyses and acknowledging limitations.
- What constitutes research (e.g. the ARC definition) and what counts as sound evidence in the

development of policy and practice

- The responsibility of researchers to present their findings honestly

### Graduate Attributes

The Federation University Federation graduate attributes (GA) are entrenched in the [Higher Education Graduate Attributes Policy](#) (LT1228). FedUni graduates develop these graduate attributes through their engagement in explicit learning and teaching and assessment tasks that are embedded in all FedUni Courses. Graduate attribute attainment typically follows an incremental development process mapped through Course progression.

**One or more graduate attributes must be evident in the specified learning outcomes and assessment for each FedUni Unit, and all attributes must be directly assessed in each Course**

Graduate attribute and descriptor		Development and acquisition of GAs in the Unit	
		Learning Outcomes (KSA)	Assessment task (AT#)
GA 1 Thinkers	Our graduates are curious, reflective and critical. Able to analyse the world in a way that generates valued insights, they are change makers seeking and creating new solutions.	K1, K2, K3, K4, K5 S1, S2, S3, A1, A2, A3	AT1, AT2
GA 2 Innovators	Our graduates have ideas and are able to realise their dreams. They think and act creatively to achieve and inspire positive change.	A1, A2, S3,	AT2
GA 3 Citizens	Our graduates engage in socially and culturally appropriate ways to advance individual, community and global well-being. They are socially and environmentally aware, acting ethically, equitably and compassionately.	K4, K5, S2, A3	AT1
GA 4 Communicators	Our graduates create, exchange, impart and convey information, ideas, and concepts effectively. They are respectful, inclusive and empathetic towards their audience, and express thoughts, feelings and information in ways that help others to understand.	K1, K2, K5 S2, A1, A2, A3	AT2
GA 5 Leaders	Our graduates display and promote positive behaviours, and aspire to make a difference. They act with integrity, are receptive to alternatives and foster sustainable and resilient practices.	K4, S2	AT1

### Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1, K2, K3, S1, S2, S3, A2	Mid-term quiz	Quiz	30-40%
K1, K2, K3, K4, K5, S1, S2, S3, A1, A2, A3, A4	Construct a short survey on a chosen research question, administer amongst classmates, and analyse the data using appropriate statistical analyses.	Written report	60-70%

### Alignment to the Minimum Co-Operative Standards (MiCS)

The Minimum Co-Operative Standards (MiCS) are an integral part of the Co-Operative University Model. Seven criteria inform the MiCS alignment at a Course level. Although Units must undertake MiCS mapping, there is NO expectation that Units will meet all seven criteria. The criteria are as follows:

1. Co-design with industry and students
2. Co-develop with industry and students

3. Co-deliver with industry
4. FedTASK alignment
5. Workplace learning and career preparation
6. Authentic assessment
7. Industry-link/Industry facing experience

MiCS Course level reporting highlights how each Course embraces the principles and practices associated with the Co-Operative Model. Evidence of Course alignment with the MiCS, can be captured in the Course Modification Form.

**MICS Mapping has been undertaken for this Unit** No

Date:

**Adopted Reference Style:**

APA

Refer to the [library website](#) for more information

Fed Cite - [referencing tool](#)