



EDST4200

Using and Interpreting Educational Data

Session 2, In person-scheduled-weekday, North Ryde 2023

Macquarie School of Education

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Disclaimer

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General Information

Unit convenor and teaching staff
Lecturer, tutor, & subject convenor
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Monday - Friday, 9 am - 5 pm

Tutor

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Contact via Email

Mondays and Tuesdays

Fay Hadley

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Credit points

10

Prerequisites

160cp at 1000 level or above

Corequisites

Co-badged status

Unit description

This unit focuses on the use of various forms of educational data to support learning. Students will examine the sources of data and develop an understanding of the types of data that can be used for different purposes. They will learn to analyse, interpret, apply and critically evaluate data from classroom assessments, state and national tests and large-scale standardised assessment programs. They will also develop reflexive skills as they draw upon a range of data to inform their practice.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: Identify various sources of educational data.

ULO2: Apply data literacy skills to make inferences from qualitative and quantitative data sets.

ULO3: Examine techniques for analysing and interpreting qualitative and quantitative data.

ULO4: Critically evaluate qualitative and quantitative data collection instruments.

ULO5: Identify professional challenges presented in the data and reflect upon the implications for their own teaching practice. Examine the purposes and types of feedback to students and reportage to parents and other stakeholders.

General Assessment Information

- Students should be aware of and apply the University policy on academic honesty (see: <https://policies.mq.edu.au/document/view.php?id=3>)
- Unless a Special Consideration (see: <https://students.mq.edu.au/study/assessment-exams/special-consideration>) request has been submitted and approved, a 5% penalty (of the total possible mark) will be applied each day a written assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a mark of, 0 (zero) will be awarded even if the assessment is submitted. Submission time for all written assessments is set at 11:55pm. A 1-hour grace period is provided to students who experience a technical issue. This late penalty will apply to non-timed sensitive assessment (incl essays, reports, posters, portfolios, journals, recordings etc).
- Late submission of time sensitive tasks (such as tests/exams, performance assessments/presentations, scheduled practical assessments/labs etc) will only be addressed by the unit convenor in a Special consideration application. Special Consideration outcome may result in a new question or topic.
- Please format assessments using 12-point font and 1.5 spacing.
- All assessments are submitted electronically. Turnitin plagiarism detection software is used to check all written assessments.
- Students can use Turnitin's Originality Report as a learning tool to improve their academic writing if this option is made available in the unit.

- Students should carefully check that they submit the correct file for an assessment as no re-submissions will be accepted after the due date and time, including instances where students upload an incorrect file in error.
- Word limits are strictly applied. Work above the word limit will not be marked.
- All assessments are marked using a clear marking scheme or a rubric.
- Marking of all assessments is moderated by the Unit Convenor.
- Applications for extensions must be made via AskMQ (<https://ask.mq.edu.au/>).
- It is not the responsibility of unit staff to contact students who have failed to submit assessments. If you have any missing items of assessment, it is your responsibility to make contact with the unit convenor.

Units with Quiz Assessments

Quizzes are an individual assessment task and **MUST BE COMPLETED** by each student individually. Similarities in responses between students will be checked and investigated for possible collusion.

University policy on grading

Criteria for awarding grades for assessment tasks

Assignments will be awarded grades ranging from HD to F according to guidelines set out in the University's Grading Policy. For Professional Experience units the PE Report is marked as satisfactory or unsatisfactory and the Teaching Performance Assessment (in final PE units) is marked as not meets, meets or exceeds. The following descriptive criteria are included for your information.

Descriptive Criteria for awarding grades in the unit

In order to meet the unit outcomes and successfully pass this unit, students must make a genuine attempt at all assessment tasks. Where any submitted assessment task is considered to be unsatisfactory in this regard, the highest possible final grade that can be awarded for the unit will be 45.

HD (High Distinction)	Provides consistent evidence of deep and critical understanding in relation to the learning outcomes. There is substantial originality and insight in identifying, generating and communicating competing arguments, perspectives or problem-solving approaches; critical evaluation of problems, their solutions and their implications; creativity in application as appropriate to the discipline.
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D (Distinction)	Provides evidence of integration and evaluation of critical ideas, principles and theories, distinctive insight and ability in applying relevant skills and concepts in relation to learning outcomes. There is demonstration of frequent originality in defining and analysing issues or problems and providing solutions; and the use of means of communication appropriate to the discipline and the audience.
Cr (Credit)	Provides evidence of learning that goes beyond replication of content knowledge or skills relevant to the learning outcomes. There is demonstration of substantial understanding of fundamental concepts in the field of study and the ability to apply these concepts in a variety of contexts; convincing argumentation with appropriate coherent justification; communication of ideas fluently and clearly in terms of the conventions of the discipline.
P (Pass)	Provides sufficient evidence of the achievement of learning outcomes. There is demonstration of understanding and application of fundamental concepts of the field of study; routine argumentation with acceptable justification; communication of information and ideas adequately in terms of the conventions of the discipline. The learning attainment is considered satisfactory or adequate or competent or capable in relation to the specified outcomes
F (Fail)	Does not provide evidence of attainment of learning outcomes. There is missing or partial or superficial or faulty understanding and application of the fundamental concepts in the field of study; missing, undeveloped, inappropriate or confusing argumentation; incomplete, confusing or lacking communication of ideas in ways that give little attention to the conventions of the discipline.

Note: If you fail a unit with a professional experience component, the fail grade will be on your transcript irrespective of the timing of the placement.

Withdrawing from this unit

If you are considering withdrawing from this unit, please seek academic advice via <https://ask.mq.edu.au> before doing so as this unit may be a co-requisite or prerequisite for units in the following sessions and may impact your course progression.

Results

Results shown in iLearn, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit ask.mq.edu.au.

Policy on the use of ChatGTP and other Generative AI tools

Information about this unit's policy on the use of AI will be made available in the Assessment block in iLearn. Please check that information and contact the convenor if you have any questions.

Assessment Tasks

Name	Weighting	Hurdle	Due
Analysis and report on NAPLAN data set	50%	No	23:55 06/10/2023
ASSET Survey	5%	No	23:55 06/10/2023

Name	Weighting	Hurdle	Due
<u>Examination</u>	30%	No	TBA Examination period
<u>Weekly online quizzes</u>	15%	No	23:55 11/08/23 18/08/23 13/10/23 20/10/23 27/10/23

Analysis and report on NAPLAN data set

Assessment Type ¹: Report

Indicative Time on Task ²: 35 hours

Due: **23:55 06/10/2023**

Weighting: **50%**

Students are to write a *report* on a fictional school using a simulated NAPLAN data set which will require the interpretation, analysis and comparison of the data set with normative NAPLAN data. From the analysis, students will determine a specific issue which is identifiable in the data (e.g., poor attendance of students, boys not making benchmarks in reading etc.). Students will then review current empirical research on the factors relating to the chosen issue. Finally, students will outline a proposal (a list of recommendations) which are aimed at resolving the chosen issue and improving the outcomes of the fictional student cohort.

On successful completion you will be able to:

- Identify various sources of educational data.
- Apply data literacy skills to make inferences from qualitative and quantitative data sets.
- Examine techniques for analysing and interpreting qualitative and quantitative data.
- Critically evaluate qualitative and quantitative data collection instruments.
- Identify professional challenges presented in the data and reflect upon the implications for their own teaching practice. Examine the purposes and types of feedback to students and reportage to parents and other stakeholders.

ASSET Survey

Assessment Type ¹: Participatory task

Indicative Time on Task ²: 3 hours

Due: **23:55 06/10/2023**

Weighting: **5%**

The Survey is in 5 parts and students receive 1% for each part submitted.

On successful completion you will be able to:

- Identify professional challenges presented in the data and reflect upon the implications for their own teaching practice. Examine the purposes and types of feedback to students and reportage to parents and other stakeholders.

Examination

Assessment Type ¹: Examination

Indicative Time on Task ²: 35 hours

Due: **TBA Examination period**

Weighting: **30%**

The final examination will consist of short answer and extended response questions which will address all learning outcomes and content from the readings, lectures, and tutorials.

On successful completion you will be able to:

- Identify various sources of educational data.
- Apply data literacy skills to make inferences from qualitative and quantitative data sets.
- Examine techniques for analysing and interpreting qualitative and quantitative data.

Weekly online quizzes

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 15 hours

Due: **23:55 11/08/23 18/08/23 13/10/23 20/10/23 27/10/23**

Weighting: **15%**

From week three there will be 5 short online quizzes spread across the subject. These quizzes, while summative, will also have a formative assessment purpose (i.e., to consolidate content and skills taught in the weekly lectures and tutorials)

On successful completion you will be able to:

- Identify various sources of educational data.
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- Examine techniques for analysing and interpreting qualitative and quantitative data.
- Critically evaluate qualitative and quantitative data collection instruments.
- Identify professional challenges presented in the data and reflect upon the implications for their own teaching practice. Examine the purposes and types of feedback to students and reportage to parents and other stakeholders.

¹ If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the [Writing Centre](#) for academic skills support.

² Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

Required and recommended texts

There is no required textbook for this subject. All readings are provided and accessed through the Leganto online system.

Information about the unit iLearn site

This unit has a full web presence through iLearn.

Students will need regular access to a computer and the Internet to complete this unit.

Weekly access to iLearn is compulsory for all students. Important assessment information will be posted here, as will other relevant unit notices and materials, including a reading template and guide to lecture note taking to assist your studies.

Various activities and materials for discussion and critical reflection are included and students enrolled in INFQ mode are especially encouraged to use this web component. Electronic links and suggested references will be included in the Resources section. Please check the iLearn unit regularly.

Weekly lectures are available on the web through the ECHO360 lecture component. You must listen to all lectures if you do not attend these 'live'.

PowerPoint slides are available in iLearn in advance of the weekly lecture and/or are available in the Active Learning Tool.

Access and technical assistance

Information for students about access to the online component of this unit is available at <https://ilearn.mq.edu.au/login/index.php>. You will need to enter your student username and password.

Please do NOT contact the Unit Convenor regarding iLearn technical help.

Assistance is available from IT Helpdesk

Ph: 9850 4357 or 1800 67 4357

Log a request: help.mq.edu.au.

On Campus: Ground floor at 18 Wally's Walk

Structure

The unit structure can be found in the university timetable <https://timetables.mq.edu.au/2023/> In the tutorial students will discuss issues and questions arising from the lectures and prescribed readings. They are expected to base their arguments/discussions on evidence from published research and other relevant material. There will be a supporting iLearn site for the unit providing additional readings, links and materials.

The weekly program for the course with the accompanying readings/ preparation is available on the following pages or on the unit iLearn site.

Unit Schedule

Unit Schedule

Wk	Week Start	Lecture	Tutorial Topic	Reading
1	24 th July	Introduction	Types of assessment	The Unit Guide Bruniges, M. (2005). <i>An evidence-based approach to teaching and learning</i> . http://research.acer.edu.au/research_conference_2005/15 Killen, R. (2005). <i>Programming and Assessment for Quality Teaching and Learning</i> . Cengage. (pp. 128 - 135) only
2	31 st July	Quantitative and qualitative data	Analyzing educational data	Matters, G. (2006). <i>Using data to support learning in schools: Students, teachers, systems</i> . Australian Council for Educational Research (pages 1 - 14 only). Shaddock, A. (2014). <i>Using data to improve learning</i> . ACER Press. Chapter 3, 8, 9, & 10
3	7 th August Quiz 1 Friday 11th	Principles of measurement	Basic mathematics of measurement	Reynolds, C. R., Livingston, R. B., & Willson, V. (2009). <i>Measurement and assessment in education</i> . Pearson. Chapter 2 (pages 33 - 51).
4	14 th August Quiz 2 Friday 18th	Standardized Testing & NAPLAN	Understanding standardized testing & NAPLAN	Reynolds, C. R., Livingston, R. B., & Willson, V. (2009). <i>Measurement and assessment in education</i> . Pearson. Chapters 3. Pages 61 – 85.

5	21 st August			
6	28 th August			
7	4 th September			
	11 th September			Recess
	18 th September			Recess
8	25 th September			
9	2 nd October			
	<div style="border: 1px solid black; padding: 5px;"> <p>Major Assignment</p> <p>Friday 6th October</p> <p>ASSET surveys</p> <p>Friday 6th October</p> </div>			
10	9 th October Quiz 3 Friday 13 th	Quality of educational data/ assessments	Reliability	<p>Reynolds, C. R., Livingston, R. B., & Willson, V. (2009). <i>Measurement and assessment in education</i>. Pearson. pages 91 - 112.</p> <p>Killen, R. (2005). <i>Programming and Assessment for Quality Teaching and Learning</i>. Cengage Press. Chapter 4, pages 103 - 107.</p> <p>Marloes M. L. Muijselaar, Panayiota Kendeou, Peter F. de Jong & Paul W. van den Broek (2017). What Does the CBM-Maze Test Measure? <i>Scientific Studies of Reading</i>, 21:2, 120-132, DOI: 10.1080/10888438.2016.1263994</p>
11	16 th October Quiz 4 Friday 20 th	Quality of educational data/ assessments	Validity	<p>Reynolds, C. R., Livingston, R. B., & Willson, V. (2009). <i>Measurement and assessment in education</i>. Pearson. Pages 123 -146.</p> <p>Killen, R. (2005). <i>Programming and Assessment for Quality Teaching and Learning</i>. Cengage Press. Chapter 4, pages 107 -122.</p> <p>Perso, T. (2009). Cracking the NAPLAN code: Numeracy and literacy demands. <i>Australian Primary Mathematics Classroom</i>, 14 (3) online.</p> <p>Woodcock, S., Howard, S. J., & Ehrich, J. (2020). A Within-Subject Experiment of Item Format Effects on Early Primary Students' Language, Reading, and Numeracy Assessment Results. <i>School Psychology</i>, 35(1), 80–87. http://dx.doi.org/10.1037/spq0000340</p>

12	23 rd October Quiz 5 Friday 27 th	Grading & reporting	Marking, grading & reporting	Reynolds, C. R., Livingston, R. B., & Willson, V. (2009). <i>Measurement and assessment in education</i> . Pearson. Chapter 11, pages 277 – 295. Killen, R. (2005). <i>Programming and Assessment for Quality Teaching and Learning</i> . Cengage. Pages (204 - 242, chapters 9 & 10).
13	30 October			
	6 th November	EXAM PERIOD		

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Assessment Procedure](#)
- [Complaints Resolution Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#)

Students seeking more policy resources can visit [Student Policies \(https://students.mq.edu.au/support/study/policies\)](https://students.mq.edu.au/support/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au) and use the [search tool](#).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/admin/other-resources/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe [academic integrity](#) – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free [online writing and maths support](#), [academic skills development](#) and [wellbeing consultations](#).

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

The Writing Centre

[The Writing Centre](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Workshops](#)
- [Chat with a WriteWISE peer writing leader](#)
- [Access StudyWISE](#)
- [Upload an assignment to Studiosity](#)
- [Complete the Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

Student Services and Support

Macquarie University offers a range of [Student Support Services](#) including:

- [IT Support](#)
- [Accessibility and disability support](#) with study
- Mental health [support](#)
- [Safety support](#) to respond to bullying, harassment, sexual harassment and sexual assault
- [Social support including information about finances, tenancy and legal issues](#)
- [Student Advocacy](#) provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via [AskMQ](#), or contact [Service Connect](#).

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

School of Education Procedures

In addition, the following policies and procedures of the School of Education are applicable in this unit.

Attendance for undergraduate units

See the university timetable for information about when classes begin in this unit. <https://timetables.mq.edu.au/2023/>

Activities completed during weekly tutorials (internal/DAY or ONLINE DAY mode) or on campus days (external/INFQ mode) are essential for building the core knowledge and/or skills required to demonstrate the learning outcomes of this unit (and to meet the AITSL Graduate Teacher Standards and/or ACECQA requirements). Attendance at all tutorials or on campus days is expected and the roll will be taken. Make up tasks may be given if attendance is missed to ensure all content is covered to meet accreditation requirements.

Students are required to attend the tutorial in which they are enrolled. Any changes to tutorial enrolments must be completed officially through e-student. Please do not contact the unit convenor requesting a change.

Electronic Communication

It is the student's responsibility to check all electronic communication on a regular weekly basis. Communication may occur via:

- Official MQ Student Email Address
- The Dialogue function on iLearn
- Other iLearn communication functions

Fail Rule

General Coursework Rule 17 stipulates that where a student is enrolled in a practical, clinical or Professional course with fitness to practice requirements:

- if a student fails one practical, clinical or professional activity they may be permanently excluded from that course; or
- if a student fails an essential unit twice or fails the equivalent of 20 credit points they may be permanently excluded from further enrolment in that course.

Students completing a double degree will be able to continue with their other degree program provided they meet the academic progression requirements of the Academic Progression Policy.

Students completing a single Education degree (such as the BTeach/MTeach) are advised to seek academic advice.

The 5Rs Framework

The 5Rs Framework, developed by the School of Education at Macquarie University, is embedded throughout your teacher education course.

Your use of the 5Rs Framework will help you develop the capabilities that will make your teaching career sustainable and fulfilling.

In this unit, you will learn using the 5Rs framework in the following important ways:

Resilience practised inside and outside of the classroom.

In order to be more resilient to the stresses of the teaching environment, teachers need to be aware of, and maintain, their holistic health and sense of coherence. They need the confidence and clarity of mind to manage uncertain and complex issues and unexpected events whenever they arise in their career.

Reflexive in their teaching practice.

Teaching is about understanding multiple and changing ecologies of learning. This encompasses individual students' needs, the affordances of classroom spaces, student and teacher relationships, curriculums, school culture, parental expectations, community demographics and needs and expectations of the profession, and the effects of government policy.

Responsive to students, colleagues, parents and professional communities.

Teaching is a relational profession. The best teachers make deep connections with their students, parents and communities. Most of us remember a great teacher, not because of what they taught, but because they were *inspiring*. They engaged us through the personal connections they made with us, and their recognisable care for our wellbeing and success.

Ready to learn.

When teachers graduate from university, they are far from the end of their learning journey, but rather just at the beginning. The ongoing pursuit of learning is a mark of a quality teacher. There are always new methods and ideas to try. But in practice, learning needs are not a one-size-fits-all affair. Teachers need to identify their individual learning needs within the context of their career. Then, they can pursue that learning to the benefit of both themselves and their students.

Research engaged throughout their career.

Effective teaching practice is based on evidence. This evidence can come from their own research in the classroom and the latest academic research in learning, teaching, motivation, cognition, curriculum, technologies and spaces, to name a few. A critical understanding of data is essential, allowing it to be analysed and woven back into practice.