



EDST4200

Using and Interpreting Educational Data

Session 2, In person-scheduled-weekday, North Ryde 2022

Macquarie School of Education

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Disclaimer

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General Information

Unit convenor and teaching staff

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Credit points

10

Prerequisites

160cp and (EDST3000 or EDST300 or EDST3010 or EDST301 or EDST3020 or EDST302)

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

Assessment Presentation and Submission Guidelines

Please follow these guidelines when you submit each assignment:

- Allow a left and right-hand margin of at least 2cm in all assignments.
- Please type all assignments using 12-point font and 1.5 spacing.
- All assessments must be submitted through Turnitin in .doc or .pdf format
- It is the responsibility of the student to ensure that all assessments are successfully submitted through Turnitin.
- Faculty assignment cover sheets are NOT required.

Draft Submissions & Turnitin Originality Reports

- Students may use Turnitin's Originality Report as a learning tool to improve their academic writing if this option is made available in the unit.
- Students are strongly encouraged to upload a draft copy of each assessment to Turnitin at least one week prior to the due date to obtain an Originality Report.
- The Originality Report provides students with a similarity index that may indicate if plagiarism has occurred. Students will be able to make amendments to their drafts prior to their final submission on the due date.

- Generally, one Originality Report is generated every 24 hours up to the due date.

Please note:

- Students should regularly save a copy of all assignments before submission.
- Students are responsible for checking that the correct file has been uploaded, that their submission has been successful, and that it has been submitted by the due date and time.

Assignment extensions and late penalties

- In general, there should be no need for extensions except through illness or misadventure that would be categorised as serious and unavoidable disruption according to the University definition of same, see: <https://students.mq.edu.au/study/my-study-program/special-consideration>
- Applications for extensions must be made via AskMQ according to the Special Consideration policy. Extensions can only be granted if they meet the Special Considerations policy and are submitted via <https://ask.mq.edu.au/>. This will ensure consistency in the consideration of such requests is maintained.
- Students should keep an electronic file of all assessments. Claims regarding "lost" assessments cannot be made if the file cannot be produced. It is also advisable to keep an electronic file of all drafts and the final submission on a USB untouched/unopened after submission. This can be used to demonstrate easily that the assessment has not been amended after the submission date.
- **Late Assessment Submission Penalty**

Unless a 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.

Units with Quiz Assessments

Online 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. 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.

Students will be awarded grades ranging from HD to F according to guidelines set out in the policy: <https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/assessment-in-effect-from-session-2-2016>

The following generic grade descriptors provide university-wide standards for awarding final grades.

Grade	Descriptor
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.
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 on your progression through the degree.

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](#).

Assessment Tasks

Name	Weighting	Hurdle	Due
ASSET Survey	5%	No	23:59 09/09/2022
Examination	30%	No	During Examination Period
Weekly online quizzes	15%	No	12/08/2022; 19/08/2022; 14/10/2022; 21/10/2022; 28/10/2022
Analysis and report on NAPLAN data set	50%	No	23:59 30/09/2022

ASSET Survey

Assessment Type ¹: Participatory task

Indicative Time on Task ²: 3 hours

Due: **23:59 09/09/2022**

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: 25 hours

Due: **During 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: 20 hours

Due: **12/08/2022; 19/08/2022; 14/10/2022; 21/10/2022; 28/10/2022**

Weighting: **15%**

From week three there will be 7 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.
- 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.

Analysis and report on NAPLAN data set

Assessment Type ¹: Report

Indicative Time on Task ²: 27 hours

Due: **23:59 30/09/2022**

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.

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 unit.

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 external students especially are 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.

No extensions will be given for any technical issues. Allow enough time for your submissions.

Assistance is available from IT Helpdesk ph: 1800 67 4357 or log a request at help.mq.edu.au. OneHelp is the online IT support service for both students and staff.

This unit requires students to use several ICT and software skills:

- **Internet access:** The iLearn site contains materials for this unit; it is also required for the online submission of all Assessment Tasks, and for the use of Turnitin submission for ALL tasks.
- **Word processing, visual representations, and document formatting:** You are required to use an appropriate form of software to present your assignments.
- **Uploading** of assessment tasks to **iLearn**.

Structure

The unit structure can be found in the university timetable <https://timetables.mq.edu.au/>

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 website for the unit providing additional readings, links and materials. Lectures will also be available through Echo in iLearn from the following website link: <http://ilearn.mq.edu.au>

Students are required to participate in small group activities, whole class discussion, to read the weekly material in advance, and to complete brief tasks either as individuals or in pairs. 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

Wk	Week Start	Lecture	Tutorial Topic	Reading
1	25 th July	Introduction	Types of assessment	The Unit Guide Bruniges, M. (2005). An evidence-based approach to teaching and learning. http://research.acer.edu.au/research_conference_2005/15 Killen, R. (2005). Programming and Assessment for Quality Teaching and Learning. Cengage: Australia (p. 128 - 135) only Hattie, J. (2005). "What is the nature of evidence that makes a difference to learning?" http://research.acer.edu.au/research_conference_2005/7
2	1 st August	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: Victoria. Chapter 3, 8, 9, & 10
3	8 th August Quiz 1 12/08/2022	Principles of measurement	Basic mathematics of measurement	Reynolds, C. R., Livingston, R. B., & Willson, V. (2009). <i>Measurement and assessment in education</i> . Pearson: US. Chapter 2 (pages 33 - 51).
4	15 th August Quiz 2 19/08/2022	Standardized Testing & NAPLAN	Understanding standardized testing & NAPLAN	Reynolds, C. R., Livingston, R. B., & Willson, V. (2009). <i>Measurement and assessment in education</i> . Pearson: US. Chapters 3. Pages 61 – 85.
5	22 nd August			

6	29 th August			
7	5 th September ASSET survey due 9 th September			
	12 th September			Recess/ school holidays
	19 th September			Recess/ school holidays
8	26 th September Major Assignment due 30 th September 23:59			
9	3 rd October			
10	10 th October Quiz 3 14/10/2022	Quality of educational data/ assessments	Reliability	Reynolds, C. R., Livingston, R. B., & Willson, V. (2009). Measurement and assessment in education. Pearson: US. pages 91 - 112. Killen, R. (2005). Programming and Assessment for Quality Teaching and Learning. South Melbourne: Cengage Press. Chapter 4, pages 103 - 107. Marloes M. L. Muijselaar, Panayiota Kendeou, Peter F. de Jong & Paul W. van den Broek (2017) What Does the CBM-Maze Test Measure?, Scientific Studies of Reading, 21:2, 120-132, DOI: 10.1080/10888438.2016.1263994
11	17 th October Quiz 4 21/10/2022 Infrequent attendance enrolled QUIZZES (x5) 22/10/2022	Quality of educational data/ assessments	Validity	Reynolds, C. R., Livingston, R. B., & Willson, V. (2009). Measurement and assessment in education. Pearson: US. Pages 123 -146. Killen, R. (2005). Programming and Assessment for Quality Teaching and Learning. South Melbourne: Cengage Press. Chapter 4, pages 107 -122. Perso, T. (2009). Cracking the NAPLAN code: Numeracy and literacy demands. <i>Australian Primary Mathematics Classroom</i> , 14 (3) online. 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
12	24 th October Quiz 5 28/10/2022	Grading & reporting	Marking, grading & reporting	Reynolds, C. R., Livingston, R. B., & Willson, V. (2009). Measurement and assessment in education. Pearson: US. Chapter 11, pages 277 – 295. Killen, R. (2005). Programming and Assessment for Quality Teaching and Learning. Cengage. Pages (204 - 242, chapters 9 & 10).

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](#).

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/>

Activities completed during weekly tutorials (internal) or on campus days (external) 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.

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.

Attendance for Master of Teaching (Primary and Secondary) units

*Attendance at all synchronous activities, completion of non-synchronous formative/diagnostic class tasks and involvement in professional forums is **compulsory** as the Master of Teaching is a professional qualification. All students must meet the 80% attendance requirement.*

Activities completed during weekly tutorials or on campus days 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. Attendance at all tutorials or on campus days is expected and the roll will be taken.

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.

Unit Expectations

- Students are expected to read weekly readings before completing tasks and attending tutorials
- Students are expected to listen/attend weekly lectures before completing tasks and attending tutorials

Note: It is not the responsibility of unit staff to contact students who have failed to submit assignments. If you have any missing items of assessment, it is your responsibility to make contact with the unit convenor.

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

External Students

- Information about the dates if the on-campus sessions can be found in the university timetable. <https://timetables.mq.edu.au/>
- The on-campus sessions are essential to student engagement and learning and attendance on all days is expected. Failure to attend or to have an approved Special Consideration may result in a Fail grade for the unit. Please see attendance requirements in this unit guide.
- Prior to the on-campus sessions, you should have read the prescribed readings and listened to the lectures. Summarise the main points and make a note of the key terms and definitions. Prepare any discussion questions of your own that you wish to share.
- Please make effective use of the online component of the unit and access iLearn regularly. Keep up to date with listening to the lectures on a weekly basis.

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 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.

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 practiced 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, 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.