



# SPED825

## Effective Instruction in Numeracy

S1 Day 2017

*Institute of Early Childhood*

### Contents

<u>General Information</u>	2
<u>Learning Outcomes</u>	2
<u>General Assessment Information</u>	3
<u>Assessment Tasks</u>	4
<u>Delivery and Resources</u>	14
<u>Unit Schedule</u>	18
<u>Policies and Procedures</u>	20
<u>Graduate Capabilities</u>	22
<u>Required Unit Materials and Readings</u>	26
<u>Unit Web Page</u>	27
<u>Where Do I Start</u>	27

#### Disclaimer

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## General Information

Unit convenor and teaching staff

Convenor

Toni Hopper

[toni.hopper@mq.edu.au](mailto:toni.hopper@mq.edu.au)

Contact via Dialogue on Home page

X5A Room 208

Thursday - By appointment

Lecturer

Mark Carter

[mark.carter@mq.edu.au](mailto:mark.carter@mq.edu.au)

Credit points

4

Prerequisites

Admission to GradCertLearnDiffSuppTeach or GradDipSpecEd or MSpecEd

Corequisites

SPED821

Co-badged status

Unit description

This unit focuses on providing students with the information and skills necessary to guide their instruction of students at risk of failure in the area of numeracy. It addresses current research-based theoretical, conceptual and pedagogical aspects of numeracy.

## 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:

Describe and apply the range of appropriate assessment strategies relevant to numeracy skills of an individual.

Describe and apply a range of strategies relevant to the numeracy skills of individuals.

Utilise professional knowledge and capacity for problem solving to select, develop and implement appropriate assessment, programming, intervention and monitoring strategies

to meet the needs of particular individuals.

Draw on unit content, professional experience and the research literature to evaluate and critically reflect on a range of contemporary practices relevant to the development of numeracy skills in individuals.

Critically reflect on the research base underlying our current knowledge and identify both strengths and weaknesses in approaches to addressing numeracy problems in individuals.

## **General Assessment Information**

### Appeals

Appeals against grades for individual assessment components.

If any student has concern about the marking of an assessment, they must:

1. Consult the member of staff who marked the work.
2. If there is no satisfactory resolution, an appeal should be made in writing to the unit convenor within one week of the marked assessment being returned or of results being made available. The student should explicitly state the basis of the appeal.

The unit convenor will review the marking and may, at their discretion, ask for a re-marking by a second marker. If re-marking by a second marker is judged appropriate, the final mark will normally be the average of the two marks awarded for the assessment task. Students should note that the revised mark for the task may be higher, the same, or lower than the original mark. Please note that all failing assessments are double marked. The decision of the unit convenor is final.

### Grading Procedures

Results for assessments will be reported as either grades (ie., HD, D, Cr, P, F ) or moderated scores. Raw scores for all assessments will be moderated according to the University guidelines so that work judged to be of a given standard is awarded a moderated score within the following distribution: High Distinction 85-100; Distinction 75-84; Credit 65-74; Pass 50-64 ; Fail 0-49.

For example, if it is judged that the HD standard for a particular assessment is met by the work scoring 90-100, raw scores will be adjusted so that students received moderated scores between 85 and 100. Similarly, if it is judged that the Pass standard is met by work scoring 47-60, raw scores will be adjusted so that students received moderated scores between 50 and 64. This moderation takes into account both the stated performance standards for the assessment component and the degree of difficulty of the specific task.

### Fail Grades

Entry into units in the postgraduate coursework program requires a clear pass ( i.e., a final unit grade of at least "C" or "P" ) in all previously completed SPED Units. If you fail more than 51% of your units in a semester, you will be subject to review. If you have failing grades on our record (1) you may be allowed to continue at the discretion of the Head of Department ( or nominee)

with a special approval (waiver), or, (2) you may be required to reattempt the relevant units until a clear pass is obtained. Students with fail grades **MUST** seek academic advice before attempting to re-enrol.

### Assessment Weighting

There are several components of the assessment in this unit. All components must be completed. If you fail to complete all assessment components, a passing grade will not be awarded and students will receive a maximum numerical grade of 40.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Assignment</u>	20%	No	Week 8 4th May 2017
<u>Problem Solving Exercise 1</u>	40%	No	13th April, 2017
<u>Problem Solving Exercise 2</u>	40%	No	15th June 2017

## Assignment

Due: **Week 8 4th May 2017**

Weighting: **20%**

The assignment will present a task related to numeracy. The assignment will be available from the website from 13/4/2017 and will be due 11.55pm on 4/5/2017.

### What is required for the assignment?

In general good presentation, correct grammar, spelling and appropriate word choice will be expected. Express your ideas concisely and clearly, and observe any stated word limits. Please use single spacing.

You must complete the cover sheet provided for each assignment.

The assignment should be completed individually. It should be your own work, based on your personal study and research.

### How do I submit my assignment?

You will submit your assignment through Turnitin. Detailed instructions will be provided on the website.

You should follow the detailed instructions carefully. Marks (up to 5% of the total mark) may be deducted, for example, for failing to write your name on the assignment.

### How do I know my assignment submission was successful?

There are two options for you to see your uploaded Assignments. 1. Return to the Assignment activity submission point where the uploaded file will be viewable. 2. If the Activities block is

available for the unit, click on the Assignments link. All Assignment activities, including those that are 'already open' and 'closed', will be viewable here.

**Students should print a copy of one of these screens after submission. No claims regarding missing assignments will be considered under any circumstances without a copy of this printout.**

### **KEEP A COPY OF YOUR ASSIGNMENT**

### **How do I use the assignment cover sheet?**

The cover sheet will be attached to the assignment (available on the iLearn website). Note that the checklist on the assignment must be completed or your assignment will not be accepted. You will be notified through Dialogue that your assignment was not acceptable and you will need to submit the assignment again with a completed cover sheet. Note that typing your student number on the coversheet is considered equivalent to providing a signature.

### **Assignment extensions and late penalties**

Applications for extensions must be made via AskMQ at <https://ask.mq.edu.au> as a "Disruption to Studies" request before the submission date. Students who experience a disruption to their studies through ill-health or misadventure are able to apply for this request. *Extensions can only be granted if they meet the Disruption to Studies policy and are submitted via ask.mq.edu.au.* This will ensure consistency in the consideration of such requests is maintained.

**In general, there should be no need for extensions except through illness or misadventure that would be categorised as unavoidable disruption according to the University definition of same, and currently available at:**

[http://students.mq.edu.au/student\\_admin/exams/disruption\\_to\\_studies/](http://students.mq.edu.au/student_admin/exams/disruption_to_studies/)

**Late submissions without extension will receive a penalty of 5% reduction of the total possible mark for each day late (including weekends and public holidays).** You are reminded that submitting even just 1 day late could be the difference between passing and failing a unit. Late penalties are applied by unit convenors or their delegates after tasks are assessed.

No assessable work will be accepted after the return/release of marked work on the same topic. If a student is still permitted to submit on the basis of unavoidable disruption, an alternative topic may be set.

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.

### **What if My Hard Disk Crashed, My Pet Hippopotamus Ate My Computer, etc?**

Computer problems will not be accepted as reasons for extensions. You are responsible for making sure your work is adequately backed up. Make sure your work is regularly backed up on a USB drive or to a cloud-based backup and don't leave your submission to the last minute. Always keep your hippopotamus and computer in separate rooms.

### **What if I Accidentally Submit a Blank Assignment, the Wrong Document, etc?**

We can only mark what you submit. Make sure you re-download your assignment from the location that it was submitted and verify the correct document has been submitted. No consideration will be offered if you submit the incorrect document.

### **How do I Know My Assignment Submission was Successful?**

Staff will NOT respond to requests to confirm that assignments have been correctly submitted. You will receive an emailed receipt on successful submission of your assignment in your student email account. Make sure that this has been received and retain this receipt. No claims will be considered regarding missing assignments without this receipt. You can also re-download your assignment to double-check it was submitted (see above). Always keep a copy of your assignment.

NOTE: You should read the additional information about the conditions for disruption to studies in the General Assessment Information section of this unit guide.

Note that:

- It is advisable that students contact the unit coordinator via Dialogue **prior to submitting their request through [ask.mq.edu.au](mailto:ask.mq.edu.au)**
  - Extension will only be granted in receipt of the completed form submitted through askMQ, plus documentation.
  - Emails are not appropriate means of extension requests.
  - It is essential that you plan ahead and organise your study time effectively. Poor time management is not grounds for an extension
- **Extensions are usually not granted on the due date.**

### **What if I exceed the word limits?**

Components of answers beyond the stated word limit will not be marked. That is, answers will only be marked up to the stated word limit.

### **How will I get feedback on my assignment?**

Individual feedback will be provided electronically. Assignment marks will be available in GRADES.

### **Can I resubmit an unsatisfactory assignment?**

Resubmission of unsatisfactory assignments is not permitted.

On successful completion you will be able to:

- Describe and apply the range of appropriate assessment strategies relevant to numeracy skills of an individual.
- Describe and apply a range of strategies relevant to the numeracy skills of individuals.
- Utilise professional knowledge and capacity for problem solving to select, develop and implement appropriate assessment, programming, intervention and monitoring strategies to meet the needs of particular individuals.
- Draw on unit content, professional experience and the research literature to evaluate and critically reflect on a range of contemporary practices relevant to the development of numeracy skills in individuals.
- Critically reflect on the research base underlying our current knowledge and identify both strengths and weaknesses in approaches to addressing numeracy problems in individuals.

## Problem Solving Exercise 1

Due: **13th April, 2017**

Weighting: **40%**

Problem Solving Exercises consist of a series of practical problems. The problems presented are typically scenario based and require the practical application of principles and knowledge addressed in the unit. The assessment may involve the presentation of text-based scenarios.

Many questions will be similar in format to the problem solving activities presented during topic seminars, on the discussion forums and during problem solving review seminars for the unit. These will provide excellent preparation for Problem Solving. For example, students may be required to select measurement or monitoring strategies for a particular behaviour and scenario, write instructional objectives, identify assessment or intervention strategies from given examples and describe how to apply intervention strategies, design, comment on, analyse or interpret assessment and/or monitoring data; describe, outline, analyse, justify and/or comment on support or intervention strategies; or suggest, analyse or justify strategies for collaborating. in a given scenario.

The first Problem Solving Exercise will cover Modules 1 and 2 and Topic 1 and 2 from Module 3 and the second will cover the whole Unit but will have a focus on Module 3 Topic 3, Module 4 and Module 5.

A Problem Solving Exercise is an open book assessment of three hours duration. The Problem Solving Exercises will be completed in class (or with a supervisor for distance students). They may use both video segments and text-based scenarios or questions. You may bring any paper-based materials to the assessment including textbooks and your own notes. PLEASE NOTE THAT SHARING OF MATERIALS WILL NOT BE ALLOWED IN PROBLEM SOLVING EXERCISES UNDER ANY CIRCUMSTANCES. You may not use electronic devices such as computers, iPads or other tablets, or phones. In some cases, a calculator may be allowed, but

this must be a stand alone calculator, and not part of a phone or other electronic device.

**Problem Solving Exercises are designed to assess your competency with the material covered in the unit and, consequently, a high pass mark is typically set.**

The specific instructions for each Problem Solving Exercise will be on the first page of the question paper. You may only write on the question paper provided. Any breaches of the instructions (for example, using your own paper to make notes about questions, taking any notes out of the room where the Problem Solving is held) may result in zero marks being awarded for that exercise, or zero marks being awarded for some questions.

**NOTE: You must bring your student ID or Campus Card with you to the Problem Solving Exercise and display it on your desk.**

Information about Campus Cards is at

[http://students.mq.edu.au/services\\_and\\_facilities/services\\_facilities\\_a-z/campus\\_card/](http://students.mq.edu.au/services_and_facilities/services_facilities_a-z/campus_card/)

## **When are Problem Solving Exercises held?**

For students completing the exercises on-campus, Problem Solving Exercises are held:

**13th April 2017**

**15th June 2017**

There will be two sessions each day, one at 10am and one at 5.30pm. **Students are required to indicate which session they will attend via the Choice activity on the iLearn site. The Choice activity will be open for 48 hours following notice in the Announcements section. Students must respond in this timeframe or they will be allocated to a session.**

Problem Solving Exercises need to be completed by **distance students** with a supervisor as follows:

Should be completed between Problem Solving 1  
Monday 10th April

and

Sunday 16th April

Problem Solving 2

Monday 12th June

and

Sunday 18th June

**If a Problem Solving Exercise is completed outside these dates without a serious reason and without the approval of your unit convenor and Dr Toni Hopper, you may be awarded**



an F grade.

## Where are they held?

Compulsory Problem Solving Exercises will be held at MUSEC (Building X5A) to supervise internal students and external students who live in the Sydney metropolitan area. The Sydney metropolitan area is considered to be the area bounded by Engadine in the south, Campbelltown in the southwest, Penrith in the west, North Richmond in the northwest and Brooklyn in the North. Final decisions about boundaries are at the discretion of the External Student Supervision Coordinator (Dr Toni Hopper). Under all but exceptional circumstances (e.g., documented medical problems) it is expected that students residing in the Sydney metropolitan area will attend the on-campus assessment session.

Distance students living outside the Sydney metropolitan area will need to make arrangements for an appropriate, approved supervisor **before the end of the second week of the semester**(10th March 2017.)

**Students who normally live within the Sydney area, but who will be out of Sydney at the time of a Problem Solving Exercise MAY NOT ARRANGE external supervision.**

**Requests for supervisor changes may be considered for students permanently changing location but WILL NOT be considered for students travelling during the semester.**

**Students are required to be available for the entirety of the official examination period.**

## What are the special arrangements for distance students?

Off-campus completion of Problem Solving Exercises is also available as an additional support to students who enrol in external mode and reside outside the Sydney metropolitan area. The Sydney metropolitan area is considered to be the area bounded by Engadine in the south, Campbelltown in the southwest, Penrith in the west, North Richmond in the northwest and Brooklyn in the North. Final decisions about boundaries are at the discretion of the External Student Supervision Coordinator (Dr Toni Hopper). You need to nominate a supervisor to receive the materials and supervise Problem Solving Exercises and feedback sessions. You must also complete a Statutory Declaration stating that you will not have any unsupervised access to problem Solving Exercises and Feedback materials. Under normal circumstances, supervisors would have a working relationship with you but must not be personally related to you or in a subordinate role. Appropriate supervisors could include a head/executive teacher, school principal or school counsellor. Friends or acquaintances will not be accepted as supervisors. It is your responsibility to locate an appropriate supervisor who is acceptable to the External Student Supervision Coordinator (Dr Toni Hopper). The acceptance of nominated supervisors is entirely at the discretion of the External Student Supervision Coordinator. Under normal circumstances, materials will only be sent to the supervisor at a work postal address. If you wish to discuss the suitability of a potential supervisor, please contact Dr Hopper by email ([toni.hopper@mq.edu.au](mailto:toni.hopper@mq.edu.au)) or phone (02) 9850 9698 **Thursdays only**.

You must also complete a **Statutory Declaration** stating that you will not have any unsupervised access to Problem Solving Exercises or Feedback materials.

A SUPERVISOR NOMINATION FORM IS PROVIDED FOR DOWNLOAD IN THE ILEARN SITE

FOR EACH UNIT.

A STATUTORY DECLARATION FORM IS PROVIDED FOR DOWNLOAD IN THE ILEARN SITE FOR EACH UNIT.

## Completing the Statutory Declaration Form

You must complete ONE Statutory Declaration to cover all units you are attempting. **It is your responsibility to ensure that you read and understand the requirements of the statutory Declaration, and that you supply all required information.** Your Statutory Declaration must be witnessed and signed by a suitable person (see the list on the form). For most students, the preferred witness would be your school principal. The form must be returned with your supervisor nomination form(s) to Dr Toni Hopper.

If there is a violation of the Statutory Declaration you must contact Dr Toni Hopper and the unit convenor as a matter of urgency.

The supervisor nomination form and Statutory Declaration must be returned to Dr Hopper by the end of the second week of the semester (**10th March, 2017**). Nomination forms will not be accepted after this date and you will have to complete Problem Solving Exercises on-campus or withdraw from the unit. **This deadline is ABSOLUTELY NOT negotiable.** You will receive an acknowledgement of your supervisor nomination through Dialogue. If you do not receive an acknowledgement, your nomination has not been received and you must contact the External Student Supervision Coordinator urgently.

\*\*\*Please note that you need to provide a separate supervisor nomination form for EACH unit you are enrolled in. You should receive an acknowledgement for EACH unit you are enrolled in. You need only return one Statutory Declaration, but indicate which units you are completing.

Supervisors should be aware that they would be required to supervise you for two Problem Solving Exercises of 3 hours each. They will also need to supervise you for two feedback sessions lasting up to 1 hour each.

Further, they will be required to certify that appropriate conditions have been in place. Supervisors may do other work while you are completing the assessment/feedback sessions but they **must** remain with you. Note that if there is any anticipated variation to supervision arrangements, for example, a fire drill or if the supervisor is called away urgently, the student and/or supervisor should notify the External Student Supervision Coordinator (Dr Toni Hopper) as soon as possible after the Problem Solving Exercise has been completed. Acting as a supervisor is voluntary but supervisors do receive a formal letter of appreciation.

Problem Solving Exercises will be posted to your supervisor approximately one week before the due date and you will have a one-week window in which they must be completed and returned.

**It is critical that the assessments are completed in the date range specified.**

**It is essential that a correct WORK address is provided for your supervisor, and that other information on the Supervisor Nomination Form is accurate.**

**The provision of a non-work address (for example, your supervisor's home address) for your supervisor's workplace, or the provision of other misleading information, may be treated as academic misconduct.**

**Please ask your supervisor to carefully check the dates before signing the nomination form to ensure they will be available.**

Please note that you will need access to a computer or DVD player in order to complete the Problem Solving Exercises and/or feedback sessions.

Before EACH Problem Solving Exercise and EACH Feedback Session you will be sent, through Dialogue on the iLearn website, a copy of the letter, instructions and certification form to be sent to your supervisor. You must respond to this message **within 48 hours** to indicate that you have read and understood the conditions of the Problem Solving Exercise or Feedback Session and to confirm that the supervisor's name and mailing address are correct. Problem Solving and Feedback packages will not be mailed out until this confirmation is received.

If you provide a late response, and your assessment package is sent out late, **NO ADDITIONAL TIME WILL BE ALLOWED FOR COMPLETION**. You must still complete the Problem Solving Exercise before the **16th April (first Problem Solving exercise) or 18th June (second Problem Solving Exercise)**

## **What happens if my Problem Solving Exercise does not arrive?**

We recommend that you check with your supervisor before the day you plan to complete the Problem Solving Exercise that he/she has received the package from MUSEC. If your supervisor has not received the package, we recommend double-checking the internal mail handling within your school or organisation before contacting X5A Reception. If the materials cannot be found after a search, contact X5A Reception (phone (02) 9850 8708 or email [musec.reception@mq.edu.au](mailto:musec.reception@mq.edu.au))

## **What if I need to change my supervision arrangements?**

If your circumstances change and you no longer need to complete a Problem Solving Exercise externally, or if you are able to travel to MUSEC for a feedback session or if there are any other changes to your supervision arrangements, **you must notify the convenors of each unit you are completing AND the External Student Supervisor Co-ordinator.**

**If you complete a Problem Solving Exercise or a Feedback Session with a person who is not an approved supervisor, you may be awarded a Fail grade.**

## **How do I get feedback if I attended the on-campus session?**

Two feedback sessions are held after Problem Solving Exercises. Students who attend campus to complete the Problem Solving Exercises are normally expected to attend one of these sessions for feedback. The answers to Problem Solving Exercises will be presented. Lecturers will overview the general principles, marking key, sample answers and discuss common problems or misconceptions. Students will be able to view their marked Problem Solving

Exercises during the feedback sessions, but notes may not be made. Problem Solving Exercises will be returned for this session but they may not be retained. You will be provided with an individual feedback summary sheet.

If you have concerns about Problem Solving Exercises, please make an individual appointment after the feedback session. Individual appointments will not be made to give individual feedback unless students have attended a scheduled session or can provide evidence of unavoidable disruption to study, such as a medical certificate.

## **How do I get feedback if I completed the Problem Solving Exercise with an external supervisor?**

Feedback seminars will be audio or video-recorded and sent to external students on DVD, along with the marked Problem Solving Exercise and an individual feedback summary sheet. Materials for the feedback session will be posted to your supervisor approximately 2 weeks after receipt of the exercise. Please note that your final results will not be released until all feedback materials have been returned to the University. Please note if you plan to attend a feedback session at Macquarie University, you should inform the unit convenor that you do not require the feedback materials.

It is critical for students and supervisors to understand that students may only have access to materials in the presence of their supervisor. This means that the supervisor must post these items back to your convenor, Building X5A at Macquarie University.. You may, however, keep your individual feedback sheet. If a student has **any unsupervised access** to either the Problem Solving Exercises or feedback materials (including posting them to your convenor), they will automatically be failed on the Problem Solving Exercise, resulting in a failure on the unit. If a student decides to withdraw from the unit, materials must still be returned directly to your convenor.

## **How do I get feedback if I am an out-of-Sydney student and choose to travel to MUSEC for the Problem Solving Exercises?**

If you are a distance student, and choose to travel to the university for the Problem Solving Exercises, but do not want to travel to the feedback seminars, you will need to have a supervisor for the feedback sessions. This should be arranged by the end of the second week of semester. If there are any changes to this arrangement, you should notify your unit convenor.

## **Is there anything else I should know about Problem Solving Exercises?**

Students sometimes think that they do not need to be thoroughly familiar with the material in the unit as the exercises are open book. This is most definitely not the case. You need to be sufficiently familiar with the material to know where to look for material that will enable you to solve a given problem. Also, while you will have time in the Problem Solving Exercises to check a detail or look at an example, you will NOT have time to read chapters or review topics that have not been adequately covered in the first instance.

## **What if I am unable to complete a Problem Solving**

## Exercise?

If you are unable to attend a Problem Solving Exercise, an application for extension or an alternate date **should submit a disruption to studies form** through ask@mq.edu.au. You must contact your unit convenor prior to submitting the request.

Reasons for the extension need to be documented through the disruption to study process accessible through ask@mq.edu.au and supported with documentation (e.g. a Professional Authority Form).

Extension will only be granted in receipt of the completed form submitted through askMQ, plus documentation. Further information about disruption to study is in the General Assessment Information section.

**Requests that are made after the date of the Problem Solving Exercise will only be considered if the student can provide documented evidence that it was not possible to contact the unit convenor and submit a special consideration request before the due date.**

You are advised that it is Macquarie University policy not to set early examinations for individuals or groups of students. All students are expected to ensure that they are available until the end of the teaching semester, that is the final day of the official examination period.

## How do I get the results of Problem Solving Exercises?

Marked Problem Solving Exercises will be available for reviewing at the following Feedback Seminars.

Grades for the Problem Solving Exercises will be posted on the unit website, in GRADES under the TOOLS tab.

**Please note that it is Centre policy that results will not be given over the phone or by email.** Please visit the unit website for information.

On successful completion you will be able to:

- Describe and apply the range of appropriate assessment strategies relevant to numeracy skills of an individual.
- Describe and apply a range of strategies relevant to the numeracy skills of individuals.
- Utilise professional knowledge and capacity for problem solving to select, develop and implement appropriate assessment, programming, intervention and monitoring strategies to meet the needs of particular individuals.
- Draw on unit content, professional experience and the research literature to evaluate and critically reflect on a range of contemporary practices relevant to the development of numeracy skills in individuals.
- Critically reflect on the research base underlying our current knowledge and identify both strengths and weaknesses in approaches to addressing numeracy problems in

individuals.

## Problem Solving Exercise 2

Due: **15th June 2017**

Weighting: **40%**

See Problem Solving Exercise 1 for full details of Problem Solving Exercises.

On successful completion you will be able to:

- Describe and apply the range of appropriate assessment strategies relevant to numeracy skills of an individual.
- Describe and apply a range of strategies relevant to the numeracy skills of individuals.
- Utilise professional knowledge and capacity for problem solving to select, develop and implement appropriate assessment, programming, intervention and monitoring strategies to meet the needs of particular individuals.
- Draw on unit content, professional experience and the research literature to evaluate and critically reflect on a range of contemporary practices relevant to the development of numeracy skills in individuals.
- Critically reflect on the research base underlying our current knowledge and identify both strengths and weaknesses in approaches to addressing numeracy problems in individuals.

## Delivery and Resources

### General Organisation of the Unit

The unit is organised in a flexible delivery format. A combination of seminars ( for oncampus students), readings, and Internet delivery may be employed. In addition, support is available via telephone, Skype, the unit web site (including discussion forums and Dialogue for private communication ) and on-site consultation.

All materials will be available on line this semester. The only compulsory attendance will be for Problem Solving Exercises.



It is very important to note that components of the unit will be conducted on the web site. This means that internet access is essential to the completion of the unit.

Delivery is designed such that students may seek as much or as little assistance as required in completing the unit. It is critical that students are organised and disciplined. It is suggested that you allocate a total of 8-12 hours per week to study for this unit. If you get significantly behind in your topic coverage, it may be impossible to catch up. Please start your study as soon as possible.

## **Unit Delivery: Teaching and Learning Activities**

Readings are designed to broaden a student's understanding of topics.

All seminars (apart from feedback seminars) are audio and/or video recorded and made available on ECHO360 (previously iLecture).

Students may participate in Discussion Forums on the subject web site, complete Review Quizzes for each topic on the web site, complete the assigned readings and activities in the Study Guides and seminars, and complete any additional exercises for each topic.

### **Changes Made Since the Last Offering of the Unit**

No changes have been made to this unit since the last offering.

### **Response to Student Feedback**

Student feedback to our units is generally very positive, and we retain practices that students appreciate. We regularly make changes to units as a result of feedback. This year more practice/review questions have been included.

### **Optional Seminars**

These are typically used for delivery of new content or review. See the "Topics" table for further details. Any student may choose to attend an optional seminar.

### **Feedback Seminars**

At these seminars students may view their marked Problem Solving Exercises and the lecturer will discuss each question and respond to questions. Students who attend these sessions may make an appointment for further individual feedback if they wish. Feedback seminars will be offered more than once for each Problem Solving Exercise. Students should be aware that if they choose not to attend these seminars, individual appointments will not be made unless there is a serious reason for non-attendance (such as a documented illness). The seminars will be recorded for distance students outside the Sydney area who have an approved supervisor (see ASSESSMENT) to view under supervision.

### **Compulsory Seminars - Problem Solving Exercises**

External students living in the Sydney metropolitan area and all internal students **must** attend in-class assessment seminars. There is no compulsory on campus attendance for students completing the unit externally outside the Sydney metropolitan area. The Sydney metropolitan area is normally considered to be the area bounded by Engadine in the south, Campbelltown in

the southwest, Penrith in the west, North Richmond in the northwest and Brooklyn in the north. Final decisions about boundaries are at the discretion of the External Student Supervision Coordinator (Dr Toni Hopper).

## **Drop-in Sessions**

Most material will be available on line this semester. There will be no drop in sessions. However students may make an appointment if they wish to discuss any matters with the convenor.

## **Review Quizzes**

Generally, there will be a Review Quiz for topics in the unit, available on the unit website. These quizzes enable you to monitor your own learning. The review quizzes will remain open throughout the semester.

## **What are Review Quizzes?**

Review quizzes are online assessments in multiple-choice format. There is one quiz for each Module in the unit. We strongly suggest you complete the Review Quiz for each Module as a means of monitoring your own learning.

## **How do I do Review Quizzes?**

The quizzes may be taken by logging into the unit web site and scrolling down to the link to the quiz within each topic section.

## **I'm concerned about doing an online quiz. What should I do?**

A "dummy quiz" has been set up to give you some practice and allow you to get used to the quiz module. you may attempt the dummy quiz as many times as you like. It is strongly recommended that every student attempt the dummy quiz each semester. The dummy quiz is in the first section of the website under the heading "THINGS YOU SHOULD DO" and "Attempt the Dummy Quiz". Click on the link to open the quiz.

## **How do I know my attempt at a review quiz has been successful?**

You will receive confirmation that your quiz has been submitted. Your mark will be available in "GRADES" under the TOOLS tab on the left hand side of the webpage. Once you have completed a quiz, you should be able to view your answers and the feedback. If you are concerned about your mark, contact the unit convenor to discuss your results.

## **How many times may I attempt a quiz?**

You may attempt review quizzes as often as you like. Review quizzes are not part of the assessment, they allow you to monitor and review your own learning.

## **I can't access the quiz or it won't work correctly?**

Such problems are ALMOST ALWAYS RELATED TO USING AN INCORRECT BROWSER.



Firefox is the recommended browser for iLearn. Contact IT help if you have problems.

## Downloadable Documents

**ALL** study guides and resource materials must be downloaded from the website. Readings must be downloaded from the Multisearch website in the library, or from other sites as indicated in the study guides.

## ECHO360

### What is ECHO360?

Modules in this unit will involve a seminar recording via ECHO360 and will be accessed through links in each Module on the home page. These presentations will typically consist of video or audio. They are accessed from the unit website. The presentation may include elucidation of the readings, additional information and practical exercises. Seminars should be viewed after you have completed the relevant reading for the topic.

Information about using ECHO360 is available at

[http://www.mq.edu.au/iLearn/student\\_info/lecture\\_recordings.htm](http://www.mq.edu.au/iLearn/student_info/lecture_recordings.htm)

and

[http://www.mq.edu.au/iLearn/student\\_info/podcasts.htm](http://www.mq.edu.au/iLearn/student_info/podcasts.htm)

### What do I need to do before I access ECHO360?

In order to use ECHO360 you will need QuickTime or other video player software (iTunes, VLC or Windows Media Player) and Flash for streaming playback or for downloading. You can download QuickTime through the iLearn site and you will be prompted to install Flash when you first access ECHO360, if it is not already installed on your computer.

### What if I can't get ECHO360 working?

Don't panic. Contact the Student IT Helpdesk

Phone: (02) 9850 HELP (4357) (Option 1) or freecall 1800 67 4357

Email: [help@mq.edu.au](mailto:help@mq.edu.au)

Face to face: Building C5C Room 244, Macquarie University

Website: <http://www.mq.edu.au/onehelp/>

IT Onehelp ticket lodgement: <https://help.mq.edu.au/cgi-bin/WebObjects/OneHelp.woa>

## Discussion Forums

**Important information about the unit will be posted in Announcements section. You should check it regularly – AT LEAST ONCE EVERY 48 HOURS**

There will also be a Discussion Forum for each Module topics where students can post questions or comments and discuss the issues raised during the unit.

Although unit convenors typically check the Discussion Forums daily (on weekdays), they will not respond to all posts, as discussion between students may be more appropriate.

## Dialogue

**Important information, particularly for students outside Sydney will be sent through Dialogue. You should check it regularly - AT LEAST ONCE EVERY 48 HOURS.**

Preferably, unit related messages should be directed to unit staff using Dialogue on the website. Questions that you have that are relevant to others in the unit should be posted in Discussion Forums. If you send such questions using Dialogue, they may be posted anonymously and answered in Discussions.

## DVD

Feedback on Problem Solving Exercises for students outside the Sydney area and for international students will be presented on DVD. You should check that you have access to a suitable DVD player or computer.

Enquiries regarding all dispatch and student postgraduate materials should be directed to: [musec.reception@mq.edu.au](mailto:musec.reception@mq.edu.au)

## Unit Schedule

All seminars are in Room 130 at Building X5A. There are two compulsory assessment seminars that **MUST** be attended by internal students and external students living in the Sydney Metropolitan area. Any remaining seminars which may be held are optional.

These dates are the THURSDAY of each semester week for SPED825

DATE	TIME	SEMINAR FORMAT
6th April	5.30-6.30	Optional Review seminar
13th April	10am -1pm 5.30pm -8.30pm	COMPULSORY SEMINAR Problem Solving Exercise 1 (Modules 1, 2 and Module 3 (Topics 1 & 2))
17th April to 30th April		UNIVERSITY BREAK (No classes, but students complete independent study)
4th May	5.30pm-6.30pm	Optional on-campus seminar Feedback for PSEx 1
11th May	10am-11am	Optional on-campus seminar Feedback for PSEx 1 (REPEAT)

8th June	5.30-6.30	Optional Review seminar
15th June	10am-1pm 5.30pm -8.30pm	COMPULSORY SEMINAR Problem Solving Exercise 2 (Emphasis on Module 3 (Topic 3), Module 4 & 5) May include previously examined material.
22nd June	5.30pm-6.30pm	Optional on-campus seminar Feedback for PSEx 2
29th June	10am -11am	Optional on-campus seminar Feedback for PSEx 2 (REPEAT)

The following table gives an overview of topics covered in the unit and the suggested completion date.

Module	RECOMMENDED COMPLETION DATE	CONTENT	FORMAT
1	10th March	Introduction Mathematical Knowledge  Approaches to numeracy for students with special education needs	ECHO
2	24th March	Assessment of numeracy Skills. Testing and teaching early numeration skills (Number Sense)	ECHO
3	7th April	Testing and teaching of procedural strategies (Addition) Testing and teaching procedural strategies (Subtraction)	ECHO
4	26th May	Testing and teaching of procedural strategies (Multiplication) Testing and teaching of procedural strategies (Division)	ECHO

5	9th June	Testing and teaching Problem Solving Skills Testing and teaching functional maths	ECHO
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## Policies and Procedures

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

Academic Honesty Policy [http://mq.edu.au/policy/docs/academic\\_honesty/policy.html](http://mq.edu.au/policy/docs/academic_honesty/policy.html)

Assessment Policy [http://mq.edu.au/policy/docs/assessment/policy\\_2016.html](http://mq.edu.au/policy/docs/assessment/policy_2016.html)

Grade Appeal Policy <http://mq.edu.au/policy/docs/gradeappeal/policy.html>

Complaint Management Procedure for Students and Members of the Public [http://www.mq.edu.au/policy/docs/complaint\\_management/procedure.html](http://www.mq.edu.au/policy/docs/complaint_management/procedure.html)

Disruption to Studies Policy (in effect until Dec 4th, 2017): [http://www.mq.edu.au/policy/docs/disruption\\_studies/policy.html](http://www.mq.edu.au/policy/docs/disruption_studies/policy.html)

Special Consideration Policy (in effect from Dec 4th, 2017): <https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/special-consideration>

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of Policy Central.

## Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: [https://students.mq.edu.au/support/student\\_conduct/](https://students.mq.edu.au/support/student_conduct/)

## 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](http://ask.mq.edu.au).

## Student Support

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

## Learning Skills

Learning Skills ([mq.edu.au/learningskills](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)

- [Ask a Learning Adviser](#)

## Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

The Disability Support provides support and assistance to students with a disability/health condition in aiming to ensure that they do not experience disadvantage in reaching their academic potential. Service provision is determined on a case-by-case basis following an assessment of a student's needs and the provision of supporting documentation. Service provision is also dependent on the availability of resources.

For information about registering with the Disability Service and to download the campus Wellbeing Registration Form and health Professional Form go to:

[http://students.mq.edu.au/campus\\_life/campus\\_wellbeing\\_support\\_services/disability\\_service/how\\_to\\_register/](http://students.mq.edu.au/campus_life/campus_wellbeing_support_services/disability_service/how_to_register/)

You must register annually, irrespective of whether a disability/health condition is temporary, longterm or permanent.

Students wishing to request support services from the Disability Service should make an appointment to see a Disability Advisor IMMEDIATELY AFTER ENROLLING at Macquarie University. If you are not registered with the Disability Service at the time of an assessment task, you may not be provided with any accommodations.

Phone: (02) 9850 7497                      TTY (02) 9850 6493

Email: [campuswellbeing@mq.edu.au](mailto:campuswellbeing@mq.edu.au)

In person: Level 2, C8A (Lincoln Building)

It is **strongly recommended** that you contact convenors **IMMEDIATELY AFTER ENROLLING** (or as soon as possible for temporary disabilities) to discuss adaptations that may assist you in the successful negotiation of your chosen units.

Typically we require a minimum of three weeks notice to be able to ensure that accommodations for Problem Solving Exercises or in-class assessments can be put in place. **Please contact your unit convenor(s) and Associate Professor Mark Carter a minimum three (3) weeks before the assessment to ensure your needs are met.**

SPECIAL EDUCATION DISABILITY LIAISON OFFICER:

Associate Professor Mark Carter

Building X5A, Room 113

Phone (02) 9850 7880    email: [mark.carter.mq@gmail.com](mailto:mark.carter.mq@gmail.com)

## Student Enquiries

For all student enquiries, visit Student Connect at [ask.mq.edu.au](http://ask.mq.edu.au)

## IT Help

For help with University computer systems and technology, visit [http://www.mq.edu.au/about\\_us/offices\\_and\\_units/information\\_technology/help/](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.

### IT Help

**Phone:** (02) 9850 HELP (4357) (Option 1) or Freecall: 1800 063 191

**Email:** [help@mq.edu.au](mailto:help@mq.edu.au)

**Face to Face:** Building C5C Room 244, Macquarie University

**Website:** [http://mq.edu.au/about\\_us/offices\\_and\\_units/informatics/help/](http://mq.edu.au/about_us/offices_and_units/informatics/help/)

**IT Service Desk Request Form:** <https://help.mq.edu.au/cgi-bin/WebObjects/OneHelp.woa>

## Graduate Capabilities

### PG - Capable of Professional and Personal Judgment and Initiative

Our postgraduates will demonstrate a high standard of discernment and common sense in their professional and personal judgment. They will have the ability to make informed choices and decisions that reflect both the nature of their professional work and their personal perspectives.

This graduate capability is supported by:

### Learning outcomes

- Describe and apply the range of appropriate assessment strategies relevant to numeracy skills of an individual.
- Describe and apply a range of strategies relevant to the numeracy skills of individuals.
- Utilise professional knowledge and capacity for problem solving to select, develop and implement appropriate assessment, programming, intervention and monitoring strategies to meet the needs of particular individuals.
- Draw on unit content, professional experience and the research literature to evaluate and critically reflect on a range of contemporary practices relevant to the development of numeracy skills in individuals.
- Critically reflect on the research base underlying our current knowledge and identify both strengths and weaknesses in approaches to addressing numeracy problems in individuals.

## Assessment tasks

- Assignment
- Problem Solving Exercise 1
- Problem Solving Exercise 2

## PG - Discipline Knowledge and Skills

Our postgraduates will be able to demonstrate a significantly enhanced depth and breadth of knowledge, scholarly understanding, and specific subject content knowledge in their chosen fields.

This graduate capability is supported by:

## Learning outcomes

- Describe and apply the range of appropriate assessment strategies relevant to numeracy skills of an individual.
- Describe and apply a range of strategies relevant to the numeracy skills of individuals.
- Utilise professional knowledge and capacity for problem solving to select, develop and implement appropriate assessment, programming, intervention and monitoring strategies to meet the needs of particular individuals.
- Draw on unit content, professional experience and the research literature to evaluate and critically reflect on a range of contemporary practices relevant to the development of numeracy skills in individuals.
- Critically reflect on the research base underlying our current knowledge and identify both strengths and weaknesses in approaches to addressing numeracy problems in individuals.

## Assessment tasks

- Assignment
- Problem Solving Exercise 1
- Problem Solving Exercise 2

## PG - Critical, Analytical and Integrative Thinking

Our postgraduates will be capable of utilising and reflecting on prior knowledge and experience, of applying higher level critical thinking skills, and of integrating and synthesising learning and knowledge from a range of sources and environments. A characteristic of this form of thinking is the generation of new, professionally oriented knowledge through personal or group-based critique of practice and theory.

This graduate capability is supported by:

## Learning outcomes

- Describe and apply the range of appropriate assessment strategies relevant to numeracy skills of an individual.
- Describe and apply a range of strategies relevant to the numeracy skills of individuals.
- Utilise professional knowledge and capacity for problem solving to select, develop and implement appropriate assessment, programming, intervention and monitoring strategies to meet the needs of particular individuals.
- Draw on unit content, professional experience and the research literature to evaluate and critically reflect on a range of contemporary practices relevant to the development of numeracy skills in individuals.
- Critically reflect on the research base underlying our current knowledge and identify both strengths and weaknesses in approaches to addressing numeracy problems in individuals.

## Assessment tasks

- Assignment
- Problem Solving Exercise 1
- Problem Solving Exercise 2

## PG - Research and Problem Solving Capability

Our postgraduates will be capable of systematic enquiry; able to use research skills to create new knowledge that can be applied to real world issues, or contribute to a field of study or practice to enhance society. They will be capable of creative questioning, problem finding and problem solving.

This graduate capability is supported by:

## Learning outcomes

- Describe and apply the range of appropriate assessment strategies relevant to numeracy skills of an individual.
- Describe and apply a range of strategies relevant to the numeracy skills of individuals.
- Utilise professional knowledge and capacity for problem solving to select, develop and implement appropriate assessment, programming, intervention and monitoring strategies to meet the needs of particular individuals.
- Draw on unit content, professional experience and the research literature to evaluate and critically reflect on a range of contemporary practices relevant to the development of numeracy skills in individuals.
- Critically reflect on the research base underlying our current knowledge and identify both



strengths and weaknesses in approaches to addressing numeracy problems in individuals.

## **Assessment tasks**

- Assignment
- Problem Solving Exercise 1
- Problem Solving Exercise 2

## **PG - Effective Communication**

Our postgraduates will be able to communicate effectively and convey their views to different social, cultural, and professional audiences. They will be able to use a variety of technologically supported media to communicate with empathy using a range of written, spoken or visual formats.

This graduate capability is supported by:

## **Learning outcomes**

- Describe and apply the range of appropriate assessment strategies relevant to numeracy skills of an individual.
- Describe and apply a range of strategies relevant to the numeracy skills of individuals.
- Utilise professional knowledge and capacity for problem solving to select, develop and implement appropriate assessment, programming, intervention and monitoring strategies to meet the needs of particular individuals.
- Draw on unit content, professional experience and the research literature to evaluate and critically reflect on a range of contemporary practices relevant to the development of numeracy skills in individuals.
- Critically reflect on the research base underlying our current knowledge and identify both strengths and weaknesses in approaches to addressing numeracy problems in individuals.

## **Assessment tasks**

- Assignment
- Problem Solving Exercise 1
- Problem Solving Exercise 2

## **PG - Engaged and Responsible, Active and Ethical Citizens**

Our postgraduates will be ethically aware and capable of confident transformative action in relation to their professional responsibilities and the wider community. They will have a sense of connectedness with others and country and have a sense of mutual obligation. They will be able to appreciate the impact of their professional roles for social justice and inclusion related to

national and global issues

This graduate capability is supported by:

## **Learning outcomes**

- Describe and apply the range of appropriate assessment strategies relevant to numeracy skills of an individual.
- Describe and apply a range of strategies relevant to the numeracy skills of individuals.
- Utilise professional knowledge and capacity for problem solving to select, develop and implement appropriate assessment, programming, intervention and monitoring strategies to meet the needs of particular individuals.
- Draw on unit content, professional experience and the research literature to evaluate and critically reflect on a range of contemporary practices relevant to the development of numeracy skills in individuals.
- Critically reflect on the research base underlying our current knowledge and identify both strengths and weaknesses in approaches to addressing numeracy problems in individuals.

## **Assessment tasks**

- Assignment
- Problem Solving Exercise 1
- Problem Solving Exercise 2

## **Required Unit Materials and Readings**

### **Text**

The required text for this unit is:

Stein, M; Kinder, D; Silbert, J & Carnine, D. W. (2006). *Designing effective mathematics instruction. A direct instruction approach*. (4th ed). Upper Saddle River, NJ: Pearson Merrill Prentice-Hall.

The text will not be available from the Co-Op Bookshop so students are strongly advised to source a copy of this text from other sources as soon as possible before the unit begins.

### **Other Required Reading**

Required readings for each topic are listed in the Study Guides for each topic, available from the iLearn site. Compulsory readings may be downloaded from the multisearch section of the Library web site at: <http://www.library.mq.edu.au/reserve/> or from sites as advised in the study guides.

## Unit Web Page

### Unit web page

#### Access

An iLearn website has been established to support this unit. The site will offer the option of discussion forums on specific topics and Dialogue (Private communication) within the unit. Required study materials, review quizzes and assessment information are available on the website.

**You should check the website (General Discussion Forum and your Dialogue) at least ONCE EVERY 48 HOURS. You will NOT receive any material in the mail.**

**ALL communication is through the website.** The website may be accessed at: <https://ilearn.mq.edu.au>

Information about using iLearn is available at: [http://www.mq.edu.au/iLearn/student\\_info/](http://www.mq.edu.au/iLearn/student_info/)

This page includes information and links (on the left hand side of the page) about topics such as: navigating iLearn, using discussion forums, getting started with iLearn.

### How do I get a password?

Information on first time log in and passwords is at <https://mypassword.mq.edu.au/index.php?screen=MQInitPW>

You will need your Student OneID number, surname and data of birth.

### What if I have password problems or need IT help?

If you have password problems or any other difficulties accessing the website, please contact: Student IT Help

Phone: (02) 9850 HELP (4357) (option 1) or freecall 1800 67 4357 Email: [help@mq.edu.au](mailto:help@mq.edu.au)

Face-to-face: Building C5C, Room 244 Website: <http://www.mq.edu.au/onehelp/>

Onehelp Ticket Lodgement: <https://help.mq.edu.au/cgi-bin/WebObjects/OneHelp.woa>

#### PLEASE NOTE:

If you have contacted IT Help and still have difficulties obtaining your user name and password and are **UNABLE** to access unit websites **at the end of the first week of semester**, please contact [musec.reception@mq.edu.au](mailto:musec.reception@mq.edu.au). Arrangements may be made to email you important study materials.

### Where Do I Start

To get you started in this unit, tick off each action as you complete it.

ACTION	COMPLETED
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Carefully read this unit guide	
Carefully read this unit guide a second time	
Organise purchase of the textbook (Stein, Kinder, Silbert & Carnine, 2006)	
Go to the unit website (from Friday 24TH FEBRUARY) and check Announcements, Dialogue and Discussion Forums for messages.	
If you have problems accessing the site contact IT Help urgently.	
Go to the START HERE section of the website, read and follow the instructions.	
Go to Module 1 section of the website and follow the instructions	