

How do our
students
revise?

P. J. Walker

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How do our students revise?

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8 September 2015

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Student revision practices

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- How did you revise for your exams?
 - Is exam revision distinct from other contexts for learning?
 - How can our students revise better?
 - How can we support better revision?

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- How can our students revise better?
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Evaluating revision practices

Theory and experience

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Theoretical Are you a classicalist, a cognitivist, a constructivist, a something-else-ist?

Empirical Students are strategists!
(Particularly around exam time.)

Conclusion General theories of learning may not be well-suited to the revision context.

Evaluating revision practices

Theory and experience

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Evaluating revision practices

Lacking literature?

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Degree class A predictor of graduate employment outcomes.
A proxy for educational outcome more generally.

Closed-book exams A mainstay of mathematical assessment.

Revision strategy A chief component of student success.

So understanding student revision would be useful!

Evaluating revision practices

Lacking literature?

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Academic assumptions?

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- How did you revise?
- How do you think your students revise?
- How do you think they *ought to* revise?

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The study design

Study cohort

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- First year
- Joint honours
- Differential equations module
- Variety of disciplines

Sources of data

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- Student behaviour (quantitative)
 - Online assessment access data
 - Video capture access data
 - Maths Support Centre data
 - Lecturer experience
- Student self-evaluation (qualitative)
 - Short survey on use of revision materials ($n = 17$)
 - Email interview probing emerging themes ($n = 2$)

Sources of data

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Research staff

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Supervisor Philip Walker, lecturer on module
Student researcher Sonia Hussain, 3rd year Maths

One aim of having a student researcher was to put some
distance between the lecturer and the study.

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Study outcomes

Plenty of expected results

High use resources

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- Lecture notes
- Past papers and example sheets
- Online assessment
- Online resources

Plenty of expected results

Lower use resources

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- Textbooks
- Peer-assisted learning
- Lecturer office hours / email
- Maths Support Centre

Plenty of expected results

Time of resource use

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- A noticeable fraction of student accesses to lecture capture occur late night / early morning immediately before the exam.
- This was not seen with online assessments.

Some predictable results

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- Resources' perceived utility correlates well with use (except for lecturer contact)
- Students often revise in groups

One interesting result

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- One student explained in detail how they used textbook and web resources differently.

If a webpage is useless for you because you do not understand the procedure, you can go through another. In a book, you cannot do that. However, to find examples and exercises, I think a textbook is easier.

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Tentative suggestions for practice

Maths Support Centre

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- Improved signalling for Maths Support Centre from Maths staff.
- How do students in School of Maths modules feel about using the MSC?

Supporting revision with exercises

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- More examples and solutions.¹
- Groupwork problems for revision.

¹What's new...?

Choosing and explaining resource lists

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- Think about how your students might use the resources on your lists.
- Consider choosing textbooks for their exercises, and recommending websites for their expositions.

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Future directions

Projects raised from this study

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- Increase quality of data by increasing depth of sample.
- Is Google killing textbooks?
- What *are* the seven revision habits of highly effective students?

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Summary

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- I am interested in collaborating to get better data from a wider population.
- Some of our practices are worth revisiting in order to support student revision.
- Don't assume students revise the way that you did / would!

Thank you for
listening!

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