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Employing Learning Analytics to transform subject delivery to a slow release, student participatory design

2019 WATTLE FORUM

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UNIVERSITY
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Setting the scene

- **Correlation between lecture attendance and academic achievement** (Alzhanova-Ericsson, Bergman, & Dinnétz, 2017; Credé, Roch, & Kieszczynka, 2010)
- **Attendance rates threatened** (Yeung, Raju, & Sharma, 2016)

EDPD202 (2010-2017)

BPrimEd 2nd year Professional Development subject

Once a week:



Once a fortnight:



Learning Analytics

IMPACT AREAS

Boosting retention

- Identify struggling students sooner
- Personalised interventions

Enabling students to take control of their own learning

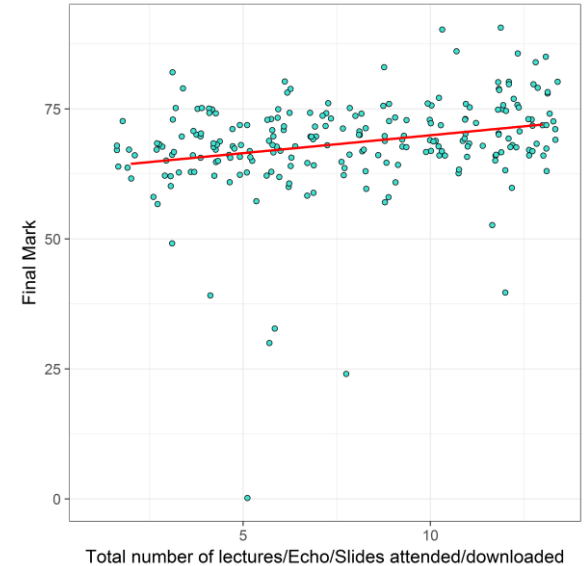
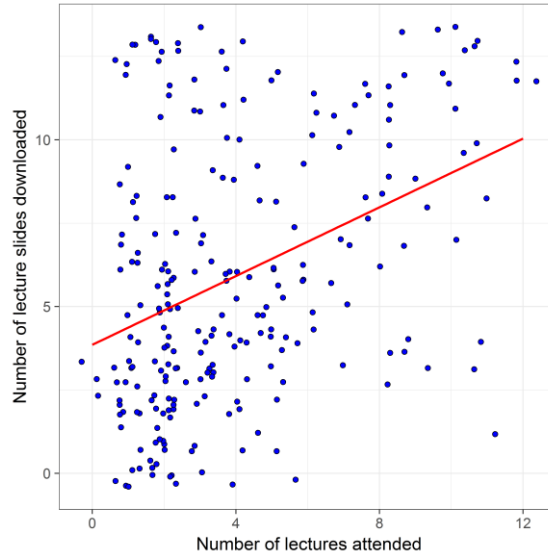
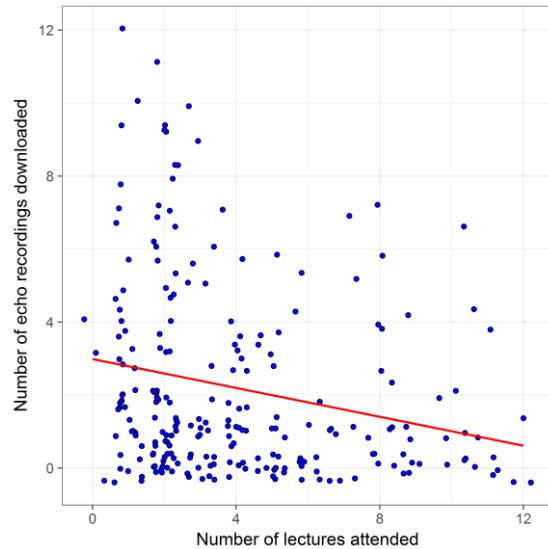
- Set learning goals
- Reflect and adjust accordingly

Enriching learning design

- Self monitor and evaluate



Learning Analytics data (2017)



EDPD202 (2018)

BPrimEd 2nd year Professional Development subject

Over a fortnight:

▶ **Module 1: Metacognition**

▶ **Module 2: Planning and Programming**

▼ **Module 3: Assessment**

This topic will explore what, how, and why teachers assess. This is because assessment is a crucial element of teaching and learning.

To complete this module, you will be required to:

- Read a reading
- Complete questions related to the reading
- Watch a video
- Complete questions related to the video
- Assessment Quiz regarding module content (due by Fri Sept 7th, 11:59pm)



Module 3



Module 3 Assessment Quiz

Restricted Not available unless: The activity **Module 3** is marked complete

Module Status : **Incomplete**

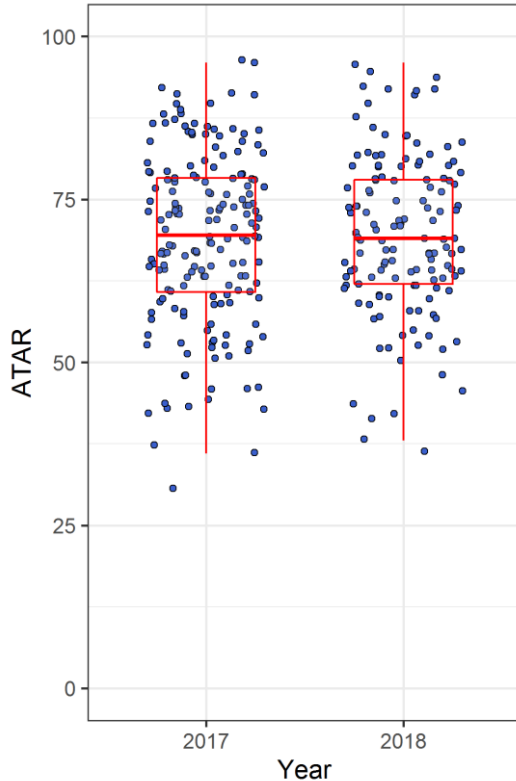


Once a fortnight:



Results - cohort comparison

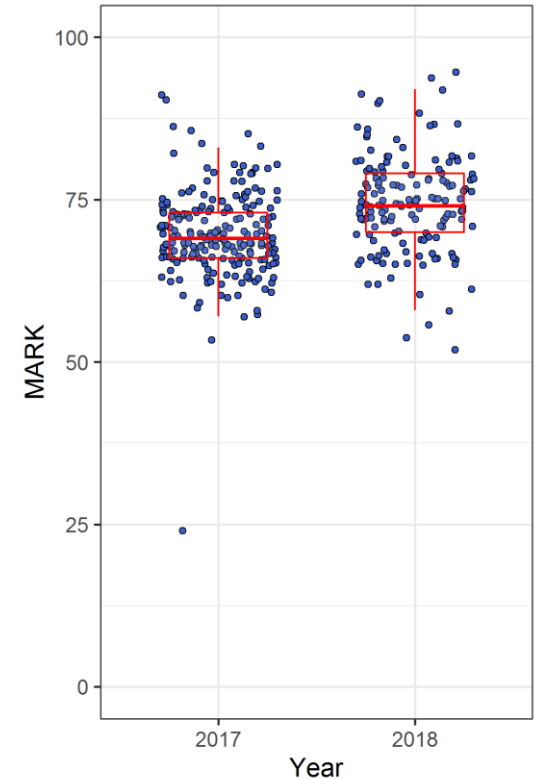
ATAR and WAM



	2017	2018
Students*	210	151
Mean WAM (post-session)	69.4	70.7
Mean ATAR (where available)	69.5	69.9
Pass %	99	99
Average mark	69.7	74.4 ***
Standard deviation mark	6.8	7.6

*Excludes students who withdrew prior to academic penalty date.

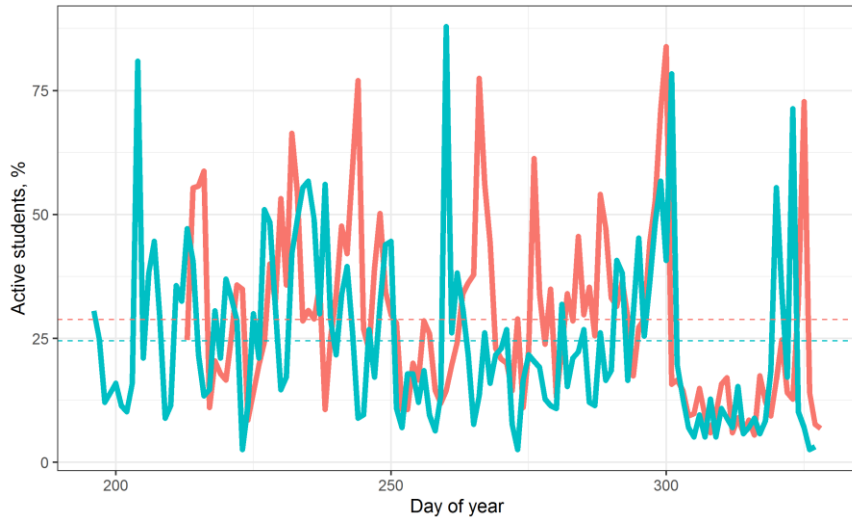
*** $p < 0.05$



Results - cohort comparison

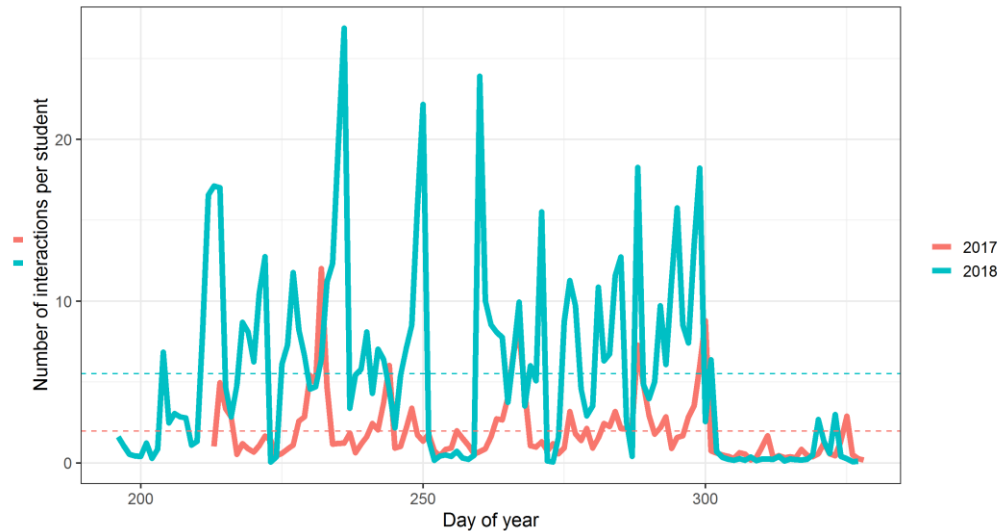
Moodle Activity

Fraction of students active on Moodle, by date



Dashed lines indicate average percentage of students active online throughout the session.

Number of interactions with Moodle per student, by date

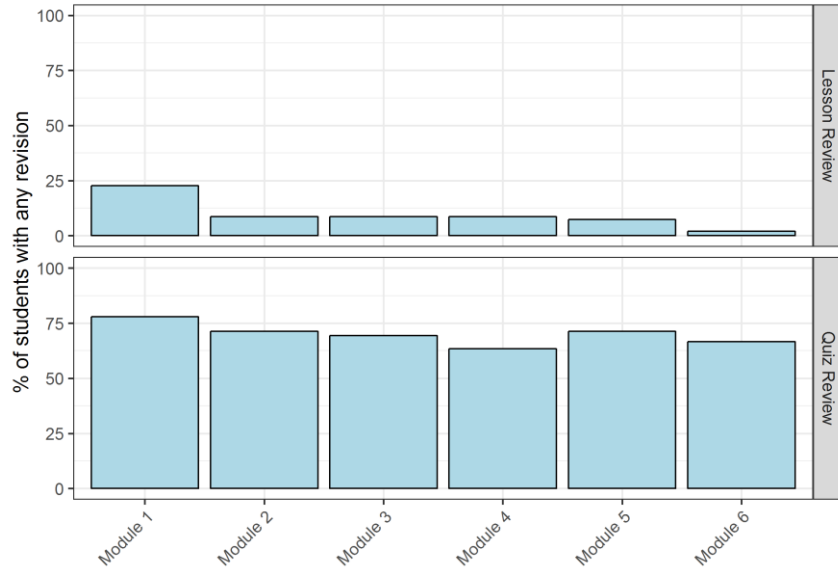


Dashed lines indicate mean interactions per student across the active period

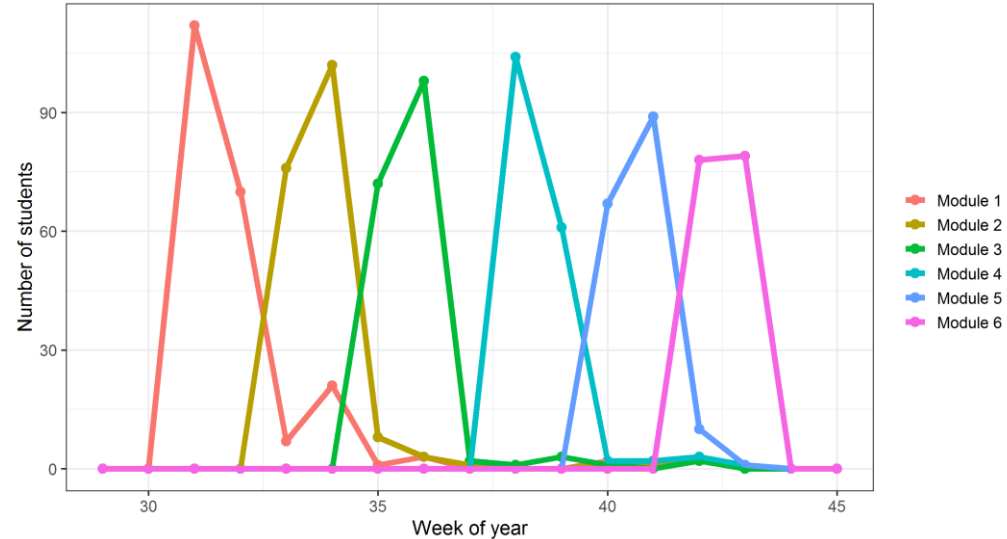
Results - 2018 Moodle modules

Lesson access and revision

Revision following quiz completion



Lesson access, by week



The y-axis counts the number of (distinct) students who accessed any pages of the lesson in that week.

Lessons Learned

- **Positive feedback from students**
- **Content experts**
- **Front-loading the effort**
- **Ethics**

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Thank you!

Questions?



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