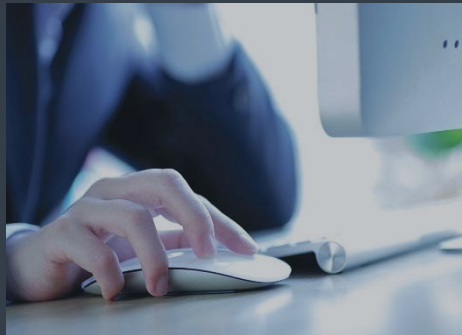


UCEM

UNIVERSITY COLLEGE
OF ESTATE MANAGEMENT

UCEM: Using Learning Analytics to Enhance the Student Experience

Dr Peter Stone & Dr Gethin Edwards



Realising your potential in the Built Environment

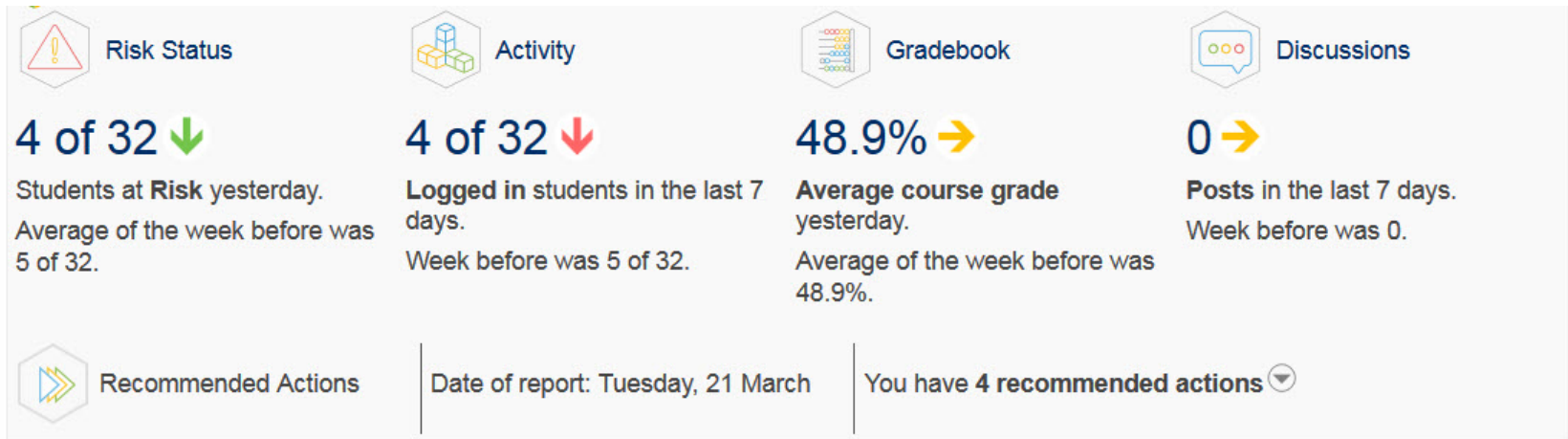
University College of Estate Management (UCEM)

- **Core Purpose:** To be the leading provider of supported online education for the Built Environment.
- **Programme Offer:** Level 3 apprenticeships up to Level 7 MSc and MBA.
- **Student Population:** ~4,000 students from approximately 100 countries, average age 32.
- **Student Community:** All online students.
- **VLE:** Implemented Moodle in February 2009.
- **Module Blueprint:** All modules adopt an agreed model that is applied consistently across all programmes.
- **No Student Left Behind:** Institution wide initiative focused on student retention and completion.

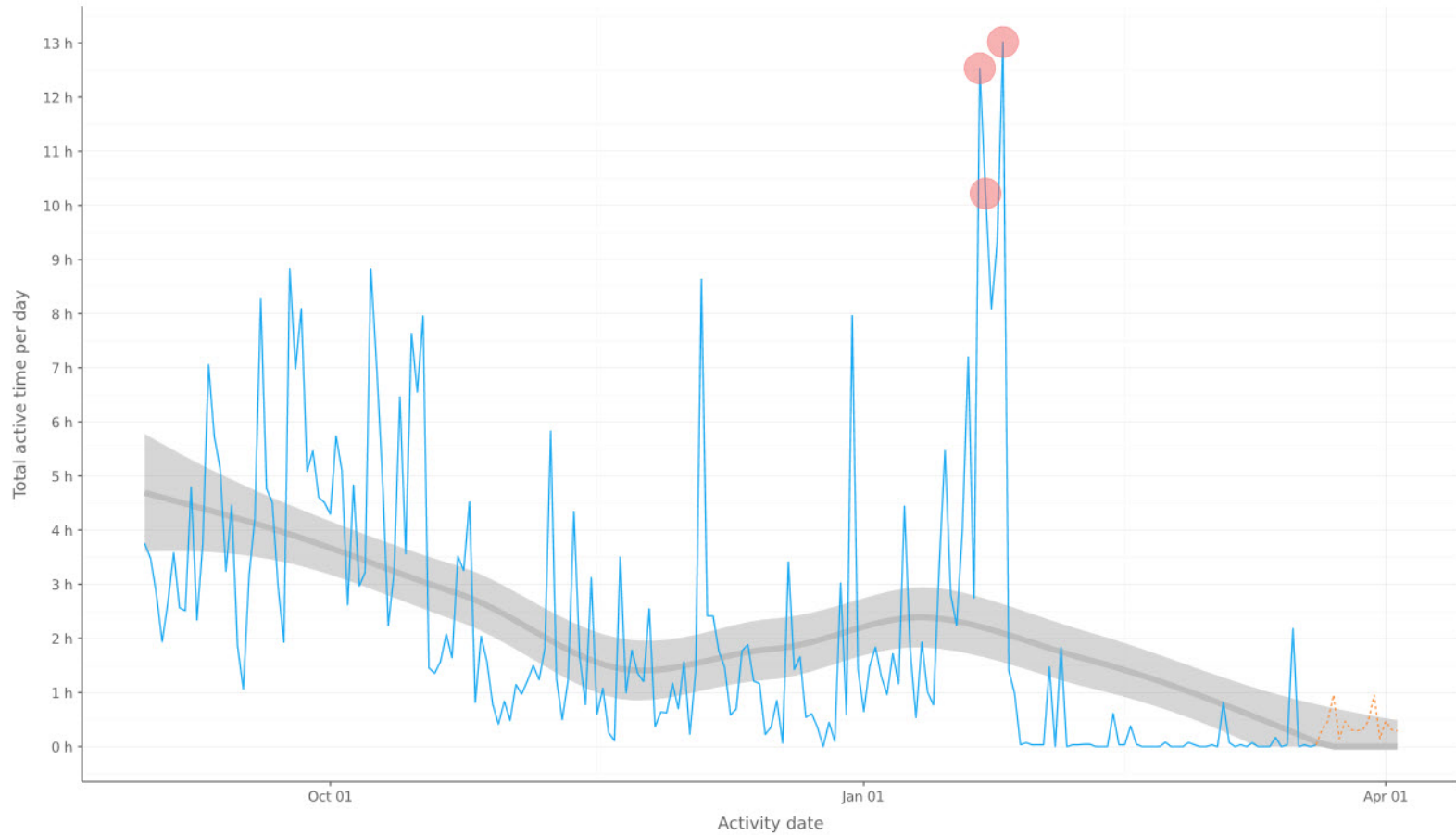
The Use of Learning Analytics at UCEM: Our Journey

- Learning Analytics implemented in September 2016.
- Supported Blackboard using historical VLE activity logs and student grade data to develop statistical model.
- Worked with Blackboard to ensure the data supports UCEM's tuition model and aids appropriate intervention.
- Using the data at an institutional level to inform decision-making.
- We are still at the early stages of our journey.

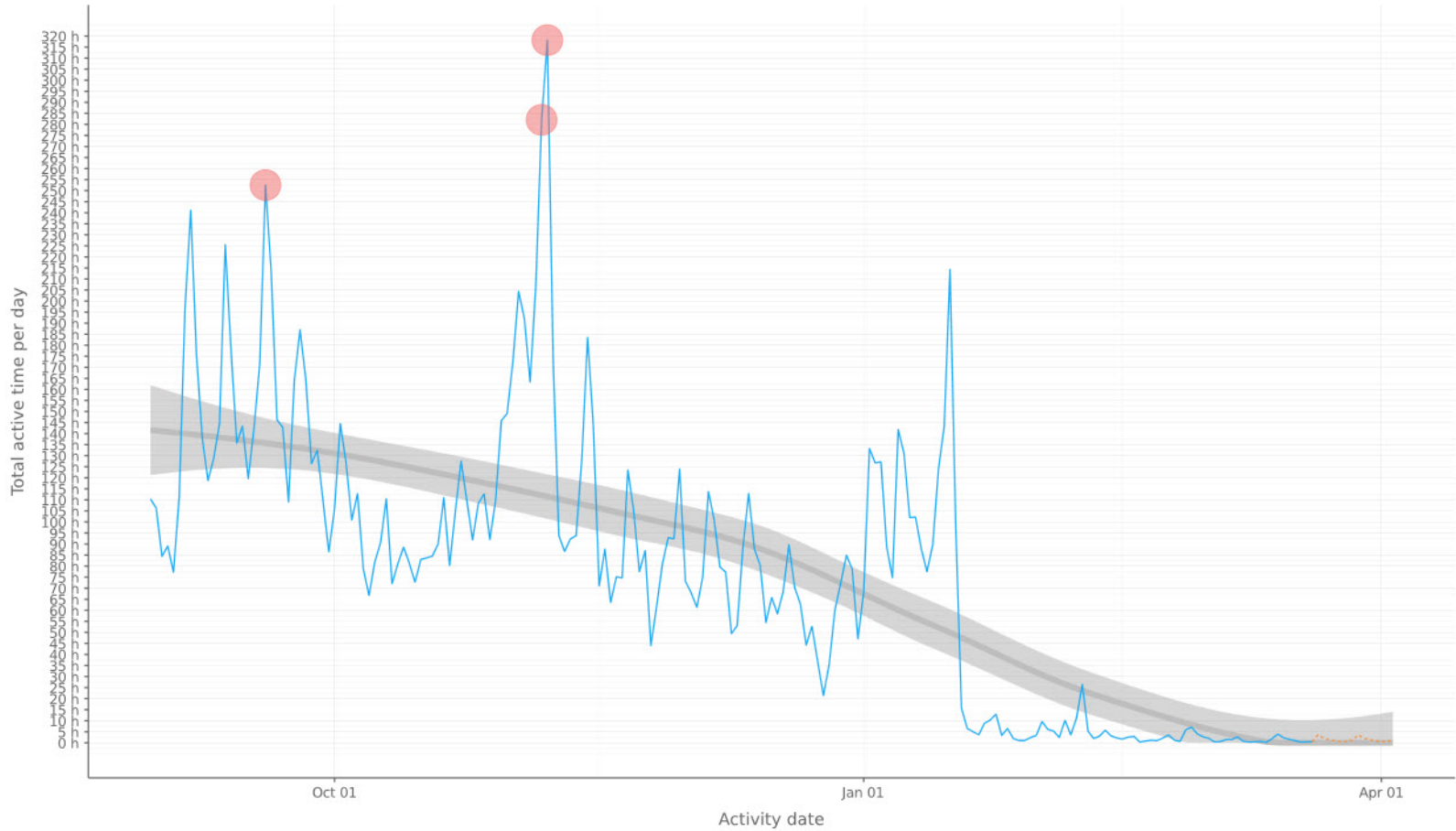
Learning Analytics Dashboard



Activity – Course Activity by Date



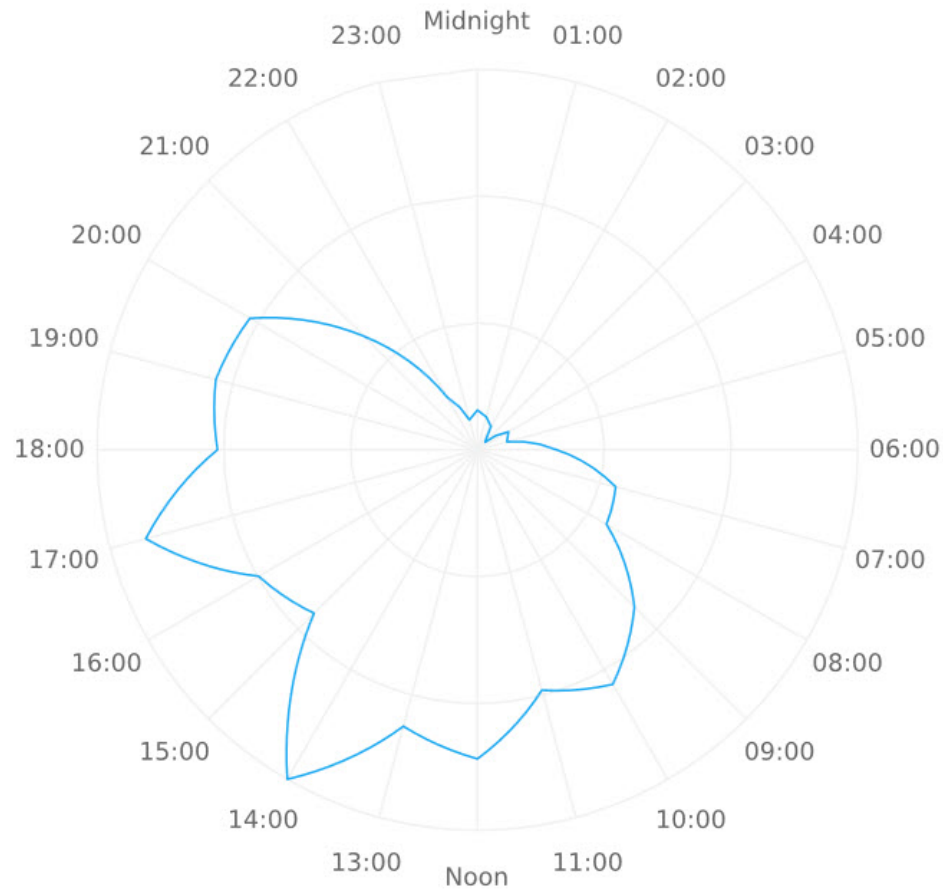
Activity – Course Activity by Date



Activity Metrics

Logged in during previous week	Last Activity	Total Discussion Posts	Time spent in course (HH:MM)	Visit regularity (daily)
No	Tue 22 Aug	4	9:25	3.35
No	Tue 25 Jul	0	13:58	2.55
Yes	Wed 30 Aug	1	21:05	2.99
No	Sat 05 Aug	0	11:05	4.10
No	Mon 19 Jun	0	6:43	3.24
No	Wed 26 Jul	0	5:17	2.11
No	Fri 30 Jun	0	1:09	0.57
No	Wed 26 Jul	2	18:32	4.52
No	Wed 26 Jul	2	37:50	6.89
No	Wed 26 Jul	0	7:51	1.39

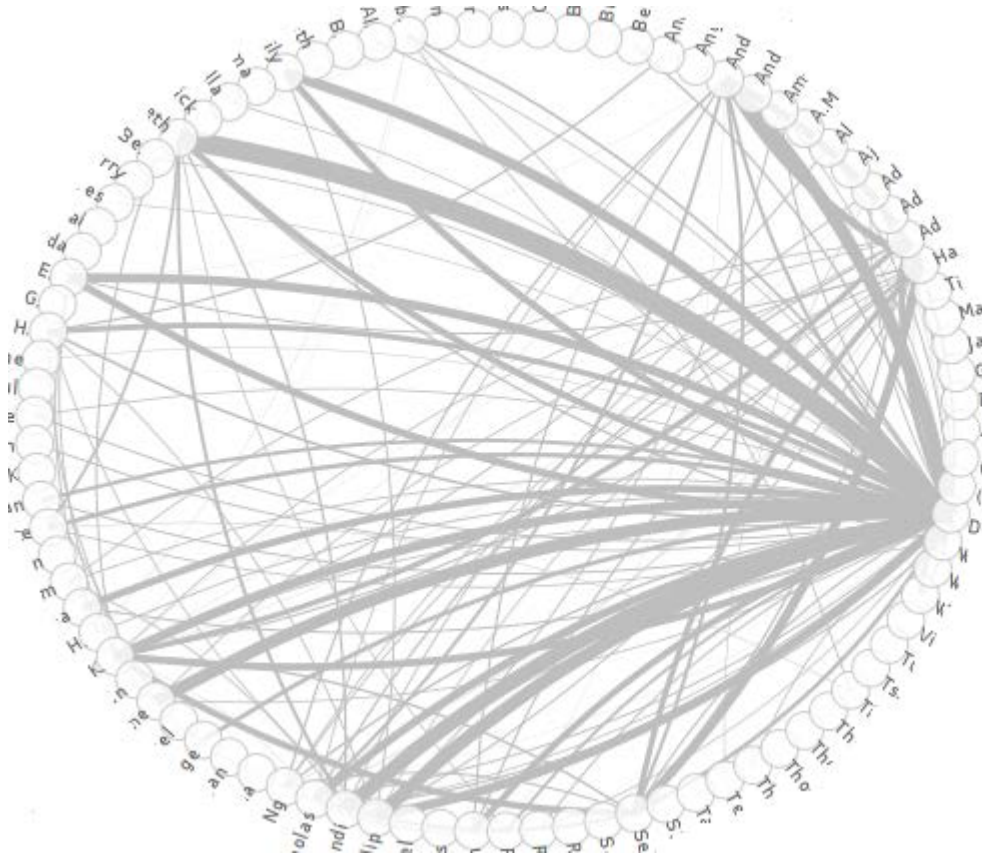
Activity by Time of Day



Discussions – Participation Metrics

Total discussion posts	Posts last week	Average original contribution (%)	Average critical thought (%)	Regularity of original contribution	Regularity of critical thought
22	0	100	27.5	9.28	0.04
38	0	67.4	92.5	6.03	0.09
25	0	42.9	49.8	4.44	0.06
17	0	42.6	36.8	4.10	0.05
18	0	36.2	49.1	2.63	0.06
31	0	30.6	70.9	2.60	0.09
9	0	18.3	14	1.98	0.03
15	0	16.3	22.7	1.41	0.03
8	0	15.1	13.3	1.40	0.02
7	0	14.7	15.2	1.12	0.02

Discussions – Interaction Analysis with Critical Thought



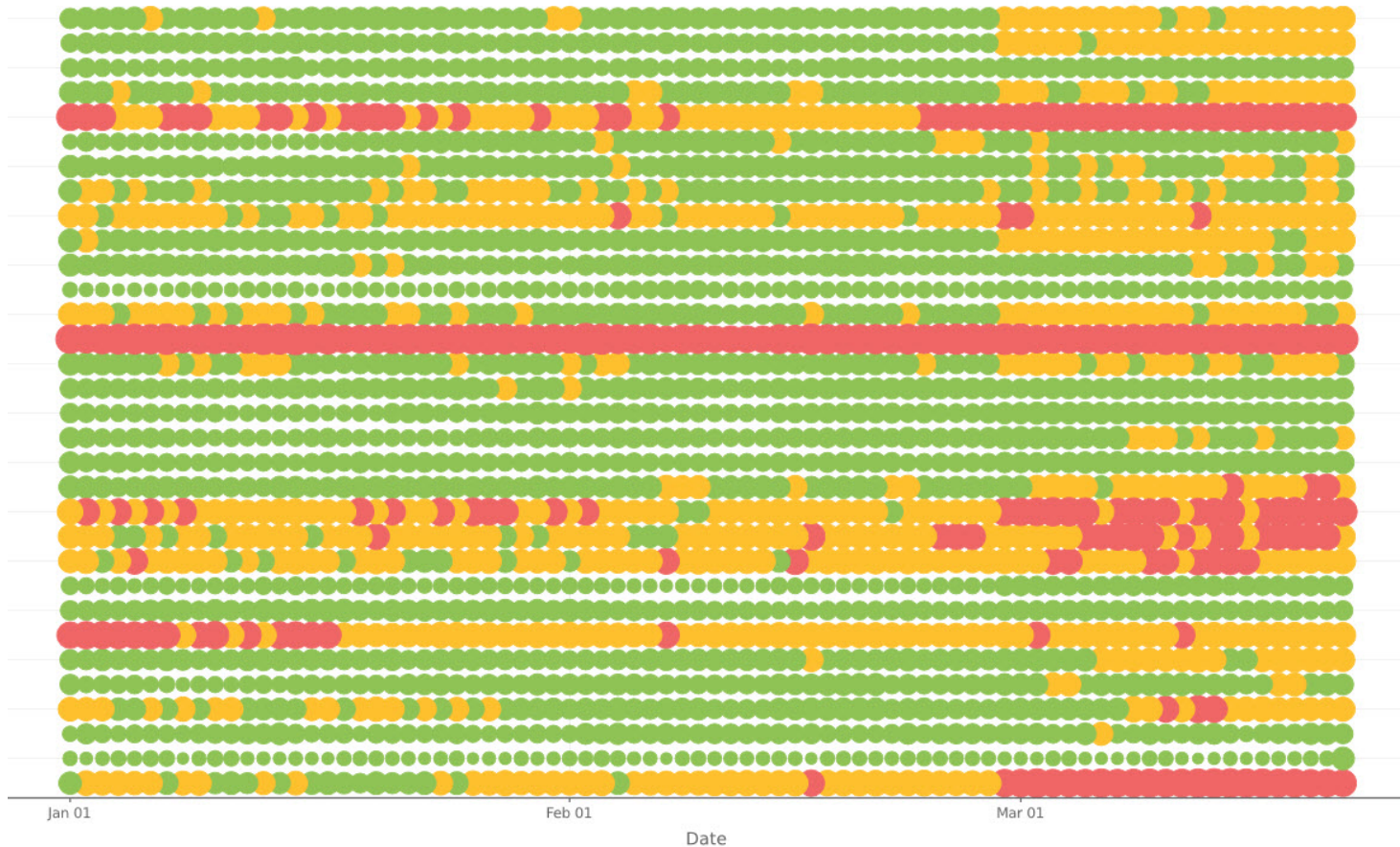
Risk Status – Risk Metrics

Surname	Given Name	Course grade (%)	Last login	Last gradable activity submitted	Time spent in course (HH:MM)	Number of posts	Total risk
[Redacted]	[Redacted]	-	Mon 22 May	-	1:42	-	High
[Redacted]	[Redacted]	-	Wed 19 Jul	-	6:17	1	High
[Redacted]	[Redacted]	-	Wed 08 Mar	-	2:08	-	High
[Redacted]	[Redacted]	-	Tue 09 May	-	1:18	-	High
[Redacted]	[Redacted]	-	Sun 30 Jul	-	21:06	11	Medium
[Redacted]	[Redacted]	-	Mon 24 Jul	-	6:07	-	Medium
[Redacted]	[Redacted]	-	Thu 27 Jul	-	12:43	2	Medium
[Redacted]	[Redacted]	-	Tue 01 Aug	-	19:54	-	Medium
[Redacted]	[Redacted]	-	Thu 27 Jul	-	8:06	-	Medium
[Redacted]	[Redacted]	-	Sun 06 Aug	Sat 05 Aug	22:19	10	Medium

Showing 11 to 20 of 34 entries

Previous 1 **2** 3 4 Next

Risk Status – Risk History

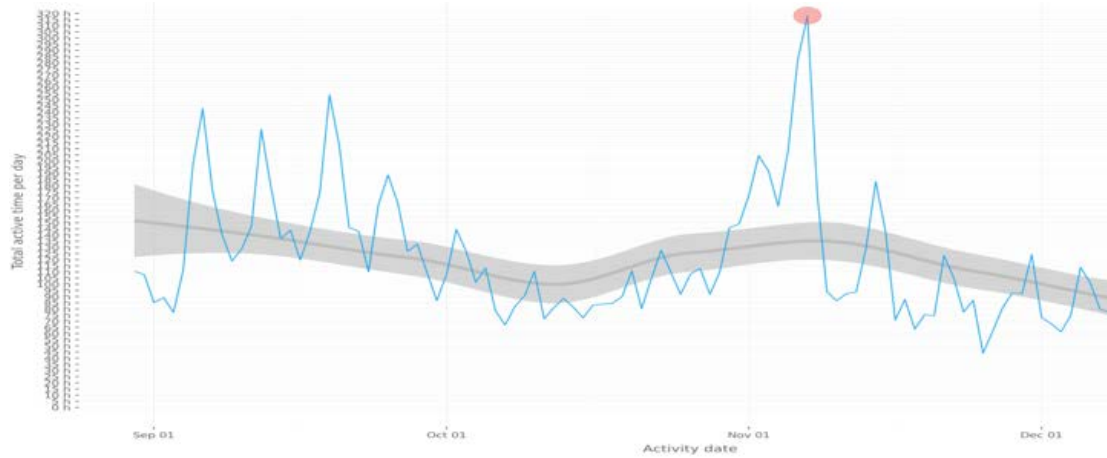


Enhancing the Student Experience – Impact and Benefits to Date

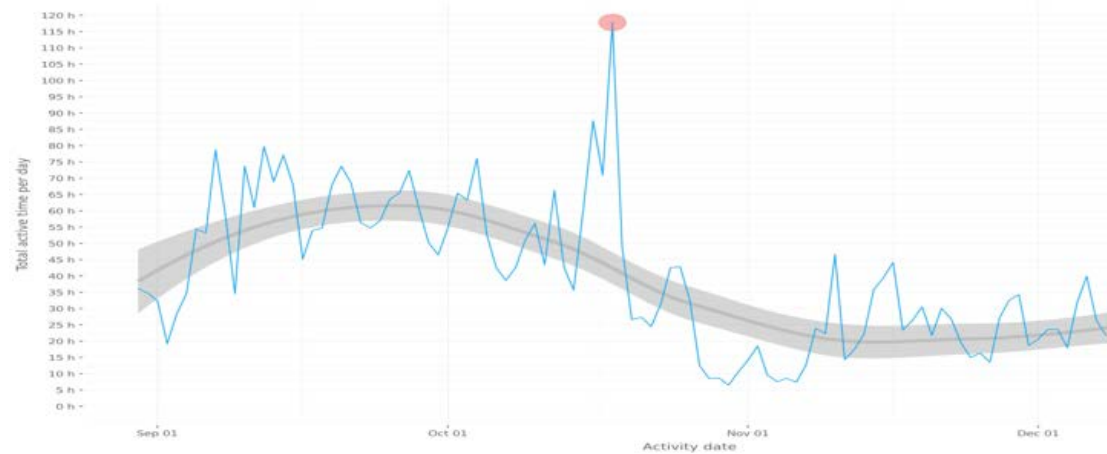
- **Informing** strategic direction with learning and teaching
- **Identifying** the extent to which assessment drives student activity, and using this to inform module development and our assessment strategy
- **Supporting** ‘No Student Left Behind’ to drive student retention and success
- **Highlighting** the success of our tuition model

Impact and Benefits to Date – Informing Strategic Direction with Learning and Teaching

Module 1



Module 2



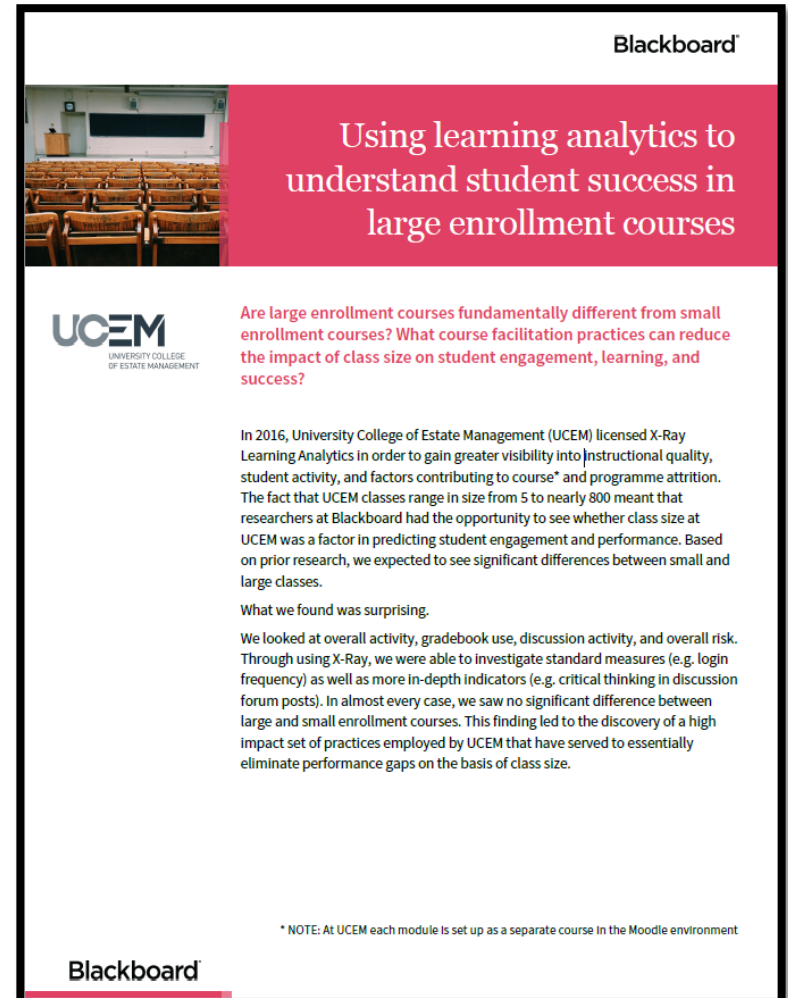
Enhancing the Student Experience – Impact and Benefits to Date

- **Informing** strategic direction with learning and teaching
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- **Highlighting** the success of our tuition model

Working with Blackboard

- Early adoption of the product has been very beneficial
- Blackboard Case Study

Google search: '[Learning analytics UCEM](#)'



The slide is a Blackboard case study presentation. It features a header with the Blackboard logo in the top right corner. Below the header is a photograph of a lecture hall with rows of wooden chairs and a blackboard at the front. To the right of the photo is a pink rectangular box containing the title 'Using learning analytics to understand student success in large enrollment courses' in white text. Below the photo and title is the UCEM logo and a red question: 'Are large enrollment courses fundamentally different from small enrollment courses? What course facilitation practices can reduce the impact of class size on student engagement, learning, and success?'. The main body of the slide contains a paragraph of text describing the project, followed by a sub-section 'What we found was surprising.' and another paragraph. At the bottom right, there is a small note: '* NOTE: At UCEM each module is set up as a separate course in the Moodle environment'. The Blackboard logo is also present in the bottom left corner of the slide.

Blackboard®

Using learning analytics to understand student success in large enrollment courses

UCEM
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Are large enrollment courses fundamentally different from small enrollment courses? What course facilitation practices can reduce the impact of class size on student engagement, learning, and success?

In 2016, University College of Estate Management (UCEM) licensed X-Ray Learning Analytics in order to gain greater visibility into instructional quality, student activity, and factors contributing to course* and programme attrition. The fact that UCEM classes range in size from 5 to nearly 800 meant that researchers at Blackboard had the opportunity to see whether class size at UCEM was a factor in predicting student engagement and performance. Based on prior research, we expected to see significant differences between small and large classes.

What we found was surprising.

We looked at overall activity, gradebook use, discussion activity, and overall risk. Through using X-Ray, we were able to investigate standard measures (e.g. login frequency) as well as more in-depth indicators (e.g. critical thinking in discussion forum posts). In almost every case, we saw no significant difference between large and small enrollment courses. This finding led to the discovery of a high impact set of practices employed by UCEM that have served to essentially eliminate performance gaps on the basis of class size.

* NOTE: At UCEM each module is set up as a separate course in the Moodle environment

Blackboard®

Access to the Reports by Module Tutor Group



X-Ray Learning Analytics - Activity [?]

Date of report: 2017-08-09

All Students ▼

All Groups	
Group A - UCEM Tutor - Lesley	(35 students)
Group B - UCEM Tutor - Anthony	(35 students)
Group C - UCEM Tutor - Anthony	(36 students)
Group D - UCEM Tutor - Martyn	(34 students)
Group E - UCEM Tutor - David / Sue	(34 students)
Group F - UCEM Tutor - Mark	(35 students)
Group G - UCEM Tutor - Sambo	(35 students)
Group H - UCEM Tutor - Aniello	(33 students)
Group I - UCEM Tutor - James	(35 students)

+Inactive Students [?]

+Activity Metrics [?]

Course Activity by Date [?]

This graph shows total daily time spent in the course (blue line), the forecasted activity levels (dotted line), and the estimated potential range in active hours (thick gray line). Extreme values are highlighted with red circles.



Concluding Thoughts

- We are at the beginning of our journey, but are already seeing the benefits
- Learning analytics is supporting UCEM's No Student Left Behind strategy

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