Aston Business School

Accredited by Association of MBAs

EFMD EQUIS ACCREDITED

AACSB ACCREDITED

SHAPING TODAY
THOSE WHO WILL SHAPE TOMORROW

Aston Business School

Accredited by Association of MBAs

EFMD EQUIS ACCREDITED

AACSB ACCREDITED

The Impact of Aston Replay on Student Performance

By
Chris Jones & Matt Olczak

The ABS Learning & Teaching Conference (Nottingham)

Introduction & Motivation

- Aston Replay is a tool that allows live lectures to be recorded and made available for students to view online.

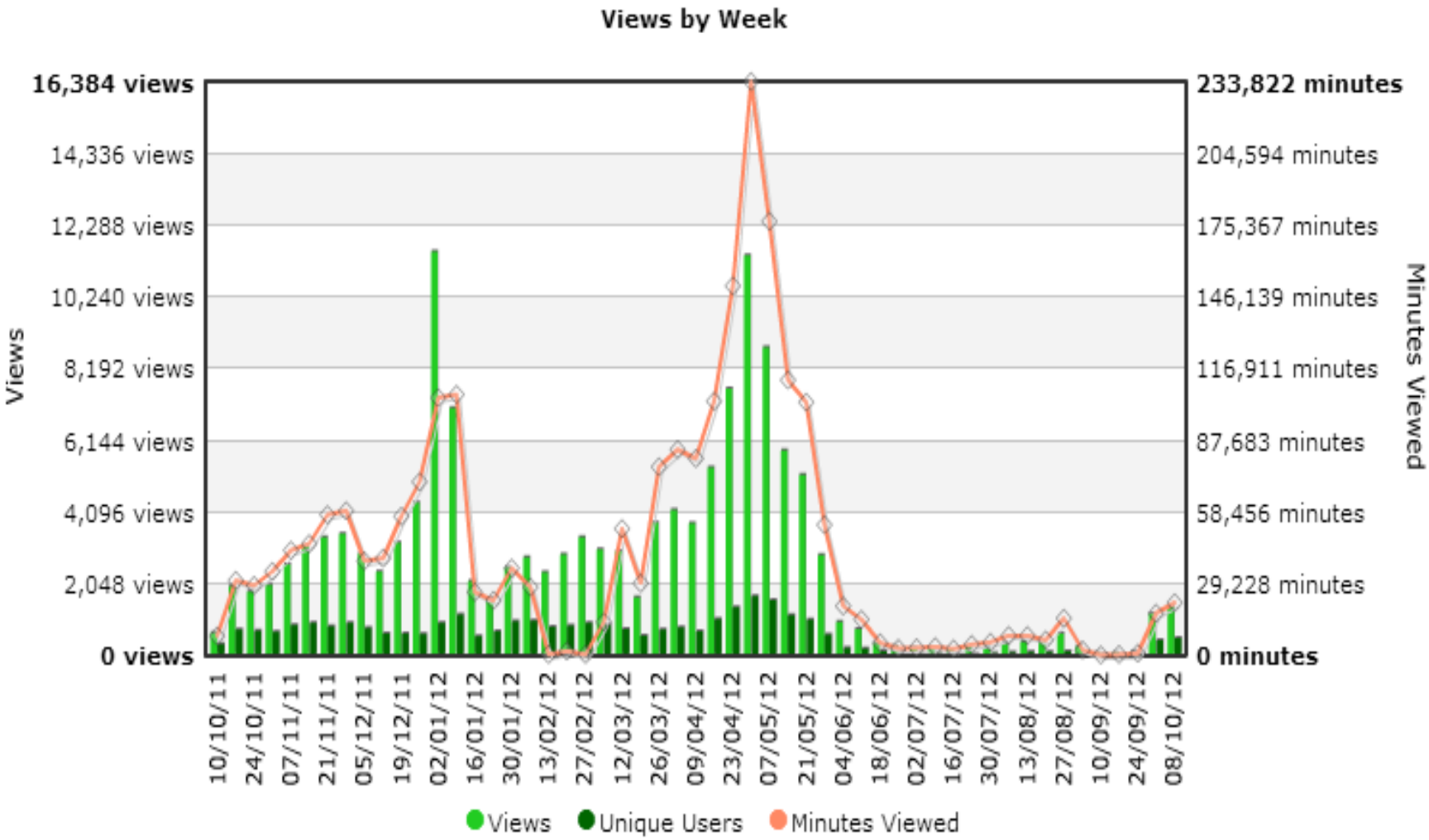
Research Questions:

1) Does watching Aston Replay improve a student's module performance?

2) Does watching Aston Replay impact differently across modes of assessment?

3) Does watching Aston Replay only during the "revision period" impact upon student performance?

The Graph!


Views by Week
16,384 views
14,336 views
12,288 views
10,240 views
8,192 views
6,144 views
4,096 views
2,048 views
0 views
Views
233,822 minutes
204,594 minutes
175,367 minutes
146,139 minutes
116,911 minutes
87,683 minutes
58,456 minutes
29,228 minutes
0 minutes
Minutes Viewed
10/10/11
24/10/11
07/11/11
21/11/11
05/12/11
19/12/11
02/01/12
16/01/12
30/01/12
13/02/12
27/02/12
12/03/12
26/03/12
09/04/12
23/04/12
07/05/12
21/05/12
04/06/12
18/06/12
02/07/12
16/07/12
30/07/12
13/08/12
27/08/12
10/09/12
24/09/12
08/10/12
Views
Unique Users
Minutes Viewed

Current Literature

- Not much using our methodology.
- The Economics literature is growing.
- Chen and Lin (2012) find that watching recordings improves performance in intermediate microeconomics by 4%.
- They also find that viewing straight after lectures has no impact on performance.
- They find that students with poorer attendance made more use of lecture capture.
- Savage (2009) find that recording have no impact of student performance.
- There is thus mixed evidence

Context & Data

- Module entitled: Economic Environment of Business.
- Assessment: 2hr exam 40%MC + 2 Essays (30% each).
- 424 students on module – they are from many of our joint business programmes.
- We map student performance data to demographic data to Lecture Capture Data
- Overall satisfaction rating for this module is 4/5

Descriptive Statistics

Table 1: Descriptive Statistics

Variable	Observations	Mean	Std. Dev.	Min	Max
Gender (1 if male)	424	0.47	0.50	0	1
Overseas Student (1 if overseas)	424	0.15	0.36	0	1
Age on entry (in years)	424	19.19	2.57	17	42
BS1102 Mark (%)	424	53.33	20.47	0	95
Essay Mark (%)	346	51.16	15.88	0	93.2
Multiple Choice Mark (%)	348	70.30	14.94	15	100
1st Year Mark (%)	411	55.41	14.76	0	82.3
Watched Aston Replay (1if watched)	424	0.55	0.50	0	1

Note: It has not been possible to obtain some marks for all of the students and therefore in these cases the number of observations is less than 424.

Table 2: Descriptive Statistics for Students who Watched Aston Replay

Variable	Observations	Mean	Std. Dev.	Min	Max
Number of lectures watched	235	5.28	3.45	1	11
Total amount of minutes watched	235	452.19	498.10	0.52	2668.27
Watched after the revision period only	235	0.71	0.45	0	1

Empirical Model

- OLS Regressions
- OLS allows the researcher to consider the impact of a unit change in an explanatory variable on the dependent variable of interest.
- Our dependent variable is student module performance.
- When interpreting the results we are holding the other variables constant.
- The Dummy Variable “Watched Aston Replay” tells us the % improvement in performance from watching Aston Replay
- We include a number of other control variables

Results

Table 3: Results

Variables	(1) BS1102 Mark	(2) BS1102 Multiple Choice Test Mark	(3) BS1102 Essay Mark
1st Year Mark	0.976***	0.901***	0.847***
	(0.0396)	(0.0856)	(0.0684)
Watched Aston Replay	**3.722*** **	**1.681**	**3.109*** **
	(1.119)	**(1.224)**	**(1.356)**
Economics	5.825***	6.184***	5.215***
	(1.397)	(1.291)	(1.510)
Male	0.587	1.607	0.467
	(1.013)	(1.136)	(1.375)
Overseas Student	-0.826	0.372	-3.168
	(2.034)	(1.411)	(2.243)
Age (in years)	-0.493*	0.0312	-0.598**
	(0.274)	(0.302)	(0.242)
Socio-economic Class Dummies	Yes	Yes	Yes
Ethnicity Dummies	Yes	Yes	Yes
School Dummies	Yes	Yes	Yes
Programme Dummies	Yes	Yes	Yes
Constant	6.968	13.24	10.62
	(6.121)	(9.043)	6.883)
Observations	382	340	338
R-squared	0.725	0.597	0.501

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Results Discussion

- Aston Replay improve performance by 3.7% holding everything else constant.
- 95% Confidence Interval suggests estimate is between 1-6 percent.
- Engagement and prior study in Economics makes a big difference to module score
- Watching Aston Replay only improves performance for the essay component, thus lecture capture may impact upon different modes of assessment.
- When we include a dummy which equals 1 if the student watches Aston Replay only after the start of the revision period then we get an insignificant estimate. This suggests that it doesn't matter when a student watches Lecture Capture, if they do, they improve performance.

Self-selection

- Our results appear attractive and suggest that everyone should record their lectures!
- This conclusion is FALSE!!!!!!!
- Our results are indicative of self-selection in that the engaged students choose to do Aston replay – they would have performed better anyway!!
- Additional results support this. We run a regression on the probability that a student watches Aston Replay the probability increases the higher the students overall year average percentage.

Conclusions

- Lecture Capture has the potential to improve performance between 1-6%.
- It is not a “Magic Bullet” these estimates are likely to have upward bias.
- Engaged students choose to use it.
- More research is needed as to how they use it – does it “crowd out” other types of study.
- Anecdotal evidence that Lecture Capture makes students Happy!
- Further work is needed for other disciplines.

Aston Business School

Accredited by Association of MBAs

EFMD EQUIS ACCREDITED

AACSB ACCREDITED

Questions?

What are your experiences?