

# Engagement in Blended Learning

## StudentShapers Maths project 2021

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# Outline

- ▶ Project aims
- ▶ Student engagement
- ▶ Project part I: data, how we measured engagement, data analysis key findings
- ▶ Project part II: support tools
- ▶ Project dissemination

Curriculum development by:

- ▶ Reviewing and measuring the student engagement in current blended learning approaches implemented in the department.
- ▶ Creating support tools for current and incoming students.

# Timeline & Partners

**Timeline:** 5-week project (28 June 2021 – 30 July 2021)

## **Student partners**

- ▶ Elly Hung (Year 2)
- ▶ Yian Zeng (Year 3)
- ▶ George Hutchings (Year 4)
- ▶ Tristan Kipferler (Year 4)

## **Staff partners**

- ▶ Mr Haris Brouskelis, Online Education Coordinator
- ▶ Ms Inkeri Hibbins, Undergraduate Liaison Officer
- ▶ Dr Charlotte Kestner, Senior Teaching Fellow
- ▶ Dr Helen Walkey, Education Insight and Evaluation Analyst, FoNS EdTech Lab

# Definition of student engagement

Student engagement has increasingly been positioned as a defining characteristic of *high-quality teaching and learning in higher education*. For example, the 2011 UK Higher Education White Paper 'Students at the Heart of the System' (BIS 2011) emphasises student engagement as a 'key element of the development of learning communities in higher education'.

However, student engagement has admittedly many meanings, and following (Ashwin & McVitty, 2015), there are three broad objects of engagement: (1) engagement to form individual understanding; (2) engagement to form curricula and (3) engagement to form communities.

- ▶ Blackboard, Panopto and Piazza data
- ▶ Three academic years: 2018-19, 2019-20, 2020-21
- ▶ Pseudonymised data
- ▶ All core/compulsory Year 1 & Year 2 modules and a selection of Year 3 & Year 4 elective modules

# How we measured engagement

## Blackboard data

- ▶ 'Course Activity Overview': number of hours spent on the module's Blackboard page

## Panopto data

- ▶ Number of times the video was viewed and downloaded
- ▶ Number of minutes the student has spent on the video
- ▶ Percentage of the video viewed
- ▶ Date the video was last viewed

## Piazza data

- ▶ Number of days the student was online
- ▶ Number of posts written by the student
- ▶ Number of edits to posts made by the student

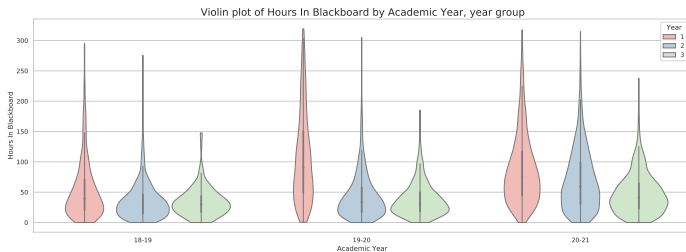
## How we measured engagement (continued)

- ▶ Number of answers written by the student
- ▶ Number of edits to answers made by the student
- ▶ Number of followups written by the student
- ▶ Number of replies to followups written by the student
- ▶ Number of 'good question' reactions given by the student
- ▶ Number of 'thanks' reactions received on answers written by the student
- ▶ Number of 'helpful' reactions received on followups written by the student
- ▶ Number of posts viewed by the student
- ▶ Number of votes cast by the student in polls
- ▶ Number of 'upvote' reactions given by the student in live Q&As



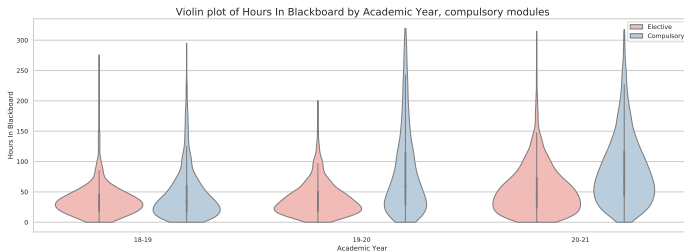
# Data analysis key findings: Blackboard

- ▶ Year 1 students spent more time on Blackboard than Year 2 and Year 3 students in all three academic years.



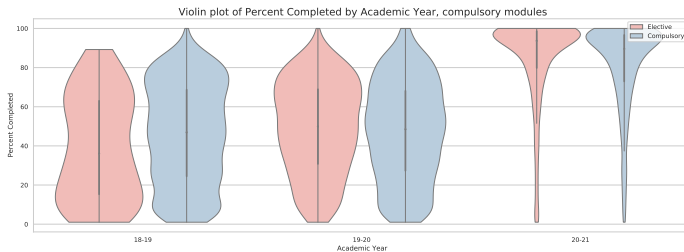
# Data analysis key findings: Blackboard (continued)

- Students spend more time on Blackboard pages for their compulsory modules than on the Blackboard pages for their elective modules.



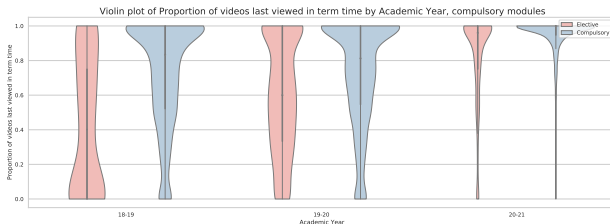
# Data analysis key findings: Panopto

- ▶ As expected, the number of Panopto views and the percent watched/completed increased during the academic year 2020-2021.



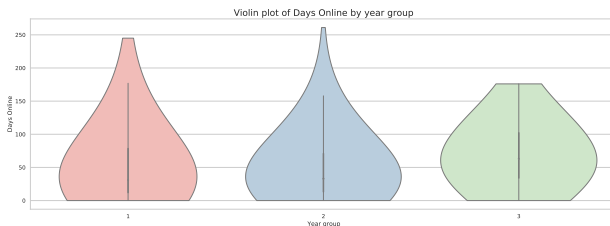
# Data analysis key findings: Panopto (continued)

- ▶ Most elective modules have a wide spread of individuals last watching a lecture in term time/the revision period, with the median generally skewed towards last viewing in term time, but there are some elective modules that are viewed predominantly in the revision period.



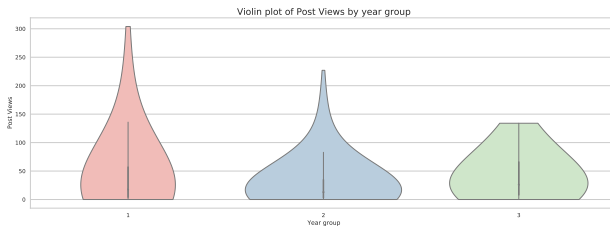
# Data analysis key findings: Piazza

- In terms of 'days online', Piazza engagement did not vary significantly between year groups, as well as between core/compulsory and elective modules.



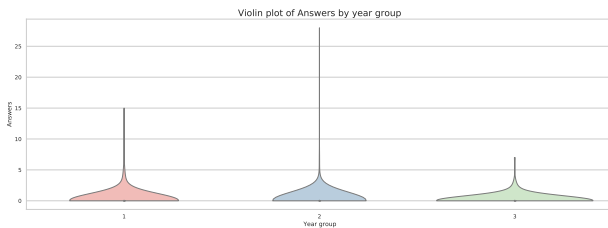
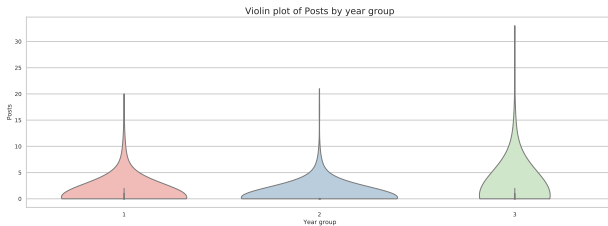
# Data analysis key findings: Piazza (continued)

- The range of posts viewed is highest in Year 1 and lowest in Year 3.



# Data analysis key findings: Piazza (continued)

- Overall, Year 3 students use the discussion forum more than first- or second-year students, in terms of asking and answering questions.



# Project outputs - Part I

- ▶ Report on the impact of the shift towards blended learning on student engagement, including a detailed data analysis and interpretation
- ▶ Mindmap summarising the data analysis key findings



Rationale – Student feedback in 2020-21 noted that the most challenging part of the start of the year was learning *how to find all material* and *how to use the various software required*.



Idea – The Department was considering to run a support pre-arrival course in September for students who have missed large parts of learning due to COVID-19 and StudentShapers would create a 'landing page' to help students navigate the course and tools more effectively.

# Preparation

Preparation included:

- ▶ Looking at recent other initiatives in the College for examples for the 'landing page', e.g. 'Imperial Chem Eng Wiki' designed by the Department of Chemical Engineering and 'Adapt to Postgrad (ATP)' designed by the Faculty of Medicine.
- ▶ Meetings with pre-sessional course coordinators and FoNS EdTech Lab team
- ▶ Developing a script – see next slide
- ▶ Filming and reviewing first footages

# Preparation (continued)

Clip	Description	Voiceover
	GEORGE MORNING - GET UP BREAKFAST commute	
<p>Bike and clore stairs</p>  	<p>22 seconds</p> <p>Yian locking up bike and giving a thumbs up</p> <p>George and Yian walking down the stairs from <u>sherfield</u> walkway to <u>clore</u></p>	<p><u>Hi</u> I'm Yian, I'm second year Maths and this is my day on Campus</p> <p><u>Usually</u> I'll have some lectures and I'll try to attend as many as possible. If I miss a <u>lecture</u> I'll try to catch up to be <u>up-to-date</u>. If I'm feeling very <u>organized</u> I'll read ahead on notes</p>
Tristan intro/studying	30 sec	<p>Hi guys, I'm Tristan and I'm in third year! If I'm not going to campus, I like to start my work early, so within an hour of waking up. If there's a problem that I was stuck on the day before, I'll typically start by taking another look at it. Sometimes, all it takes is a good night's rest to help</p>

## Project outputs - Part II

- ▶ 'How-to' videos explaining how to use Blackboard, Maths Central, EdStem, and Microsoft Teams [▶ Blackboard](#) [▶ Maths Central](#)  
[▶ EdStem](#) [▶ MS Teams](#)
- ▶ Group video titled 'Life in the Day of a Blended Learning Student', showing the student partners studying in a blended learning environment [▶ Group video](#)

# Project dissemination

- ▶ FoNS EdTech Lab shared the demo video on how-to use EdStem with staff across the faculty.
- ▶ Case study on the College webpages aiming to inform development of a College-wide learning analytics policy and ethical guidelines. See [▶ Case studies/Inspiration](#)
- ▶ Videos added to the pre-arrival course's Blackboard page, and they have also been referred to in induction procedures, highlighting good practice and top tips from students.
- ▶ Module leads from the department have asked to share project outputs with their students.

# Learning and Teaching Strategy

- 1) Research-based
- 2) Student-Centred
- 3) Technology Enhanced

Ashwin P., McVitty D. (2015) The Meanings of Student Engagement: Implications for Policies and Practices. In: Curaj A., Matei L., Pricopie R., Salmi J., Scott P. (eds) The European Higher Education Area. Springer, Cham.  
[https://doi.org/10.1007/978-3-319-20877-0\\_23](https://doi.org/10.1007/978-3-319-20877-0_23)

BIS. (2011). Students at the Heart of the System, Department for Business, Innovation and Skills.

Thank You!