The NTU Student Dashboard: developing a learning analytics platform to improve student retention and attainment.

Workshop delivered in partnership with Success for All and the ABLE Project.

Sarah Lawther and Rebecca Edwards
Session outline

• Why did NTU develop the Student Dashboard?
• What is it & how does it work?
• How have we managed the development of the resource?
• How does it inform our work to address differences in attainment?
• What are our plans for next phase?
Why did NTU develop the Student Dashboard?
Student Retention & Success

• Retention
  – Internal Audit Report into Student Retention (2012)

• HERE Project – retention and success (Foster et al 2011)

• Identifying ‘at risk’ students (Thomas and Jones 2012), (Quinn et al, 2012)

• What Works – belonging and ‘feeling known’ (Thomas 2012)

• Disparities in Student Attainment (DiSA) (Cousin and Cureton, 2012)

• Across the sector
  – Retrospective data – how can we support student retention and success?
  – Real time – how can we best support students? (JISC Inform), (Siemens, Dawson, Lynch, 2013) (Mutton and MacNeill, 2013)
What is it and how does it work?
The NTU Student Dashboard

- The Dashboard monitors students’ engagement with their course
  - Door swipes, Library use, log ins to the VLE & submission through VLE Drop box
  - In 2015-16 added – electronic resources & attendance
- It compares this data to a profile from previous years and assigns the five ratings:
  - High
  - Good
  - Partial
  - Low
  - Not fully enrolled (for students who never completed enrolment at the start of the year, or who have withdrawn)
- Students and staff can see exactly the same view
  - Staff have a few additional management screens
- Tutors can also make notes in the notes section
- Staff are also sent an alert if there is no engagement for two weeks during term time
What does the student view look like?
Name's engagement rating yesterday was **good**

The course average for yesterday was **partial**

Opens on click

<table>
<thead>
<tr>
<th>Date</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 Jun</td>
<td>partial</td>
</tr>
<tr>
<td>30 Jun</td>
<td>low</td>
</tr>
<tr>
<td>01 Jul</td>
<td>low</td>
</tr>
<tr>
<td>02 Jul</td>
<td>partial</td>
</tr>
<tr>
<td>03 Jul</td>
<td>good</td>
</tr>
</tbody>
</table>

Opens on click

**What the engagement ratings mean**

- **High**
  
  High engagement means that in the last few days you’ve been frequently using University resources such as NOW or the library.

- **Good**
  
  Good engagement means that you are regularly using University resources, for example swiping into academic buildings.

- **Partial**
  
  Partial engagement means that you are using resources, but not as frequently as those with higher engagement ratings. For example you might be logging in to NOW, but not visiting the library or using your student card to swipe into buildings.

- **Low**
  
  Low engagement means that you are only infrequently using University resources.

- **NFE**
  
  Not Fully Enrolled is a category that is only used to describe students who have not completed enrolment at the start of the year or who have left early.
Research at NTU shows that students with higher engagement ratings tend to be more successful at their studies.

Find out more

There are many things you can do to improve your engagement rating.

Find out how

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How is engagement calculated?
The Dashboard currently measures library use, NOW log ins, coursework submissions through dropbox and campus swipes. During 2015-16 we will be experimenting with attendance data, ebooks and other resources.

Is there a relationship between engagement and success?
Yes. In 2013-14 twice as many final year students with a high average engagement achieved 2:1 or 1st compared to those with a low average engagement. However the Dashboard will never be able to tell with 100% certainty what grade you will achieve. There are lots of factors that the Dashboard can't measure: how hard you work in your room, how you think, what you do with the resources you access. If your engagement is low, it definitely does not mean that you should give up. In 2013-14, 13% of final year students with a low average engagement achieved a first class honours degree. However, engagement should be treated as a useful indication. In the same year, 28% of students with a high average engagement achieved a first. The message appears clear, don’t panic if your engagement is low, but do recognise that the more you do, the more likely you are to achieve a higher grade.

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• Scroll down landing page to find more information.

• Dashboard designed to be simple at first glance, with the option to click for extra detail.

• Built in partnership with Solutionpath.

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What should I do if my engagement is ...

High
Well done, you’re doing a lot to maximise your chance of success. Please do remember that whilst high engagement will improve your chance of success it doesn’t guarantee it. You probably don’t need to do more, but could you be studying differently? Firstly, please check your grades, you might be putting a lot of effort in, but is this being translated into good grades? If not what might you do differently? Do check your feedback: are there any lessons you could learn? And do use resources such as your tutor or the library to find out about approaches to your study.

Good
Good engagement will help you get the grades you want. You should also consider the way that you are studying, could it be more effective? You should also take a look at both your grades and your tutor feedback, are there any important messages about what you could do differently?

Partial
Students with partial engagement do okay. You’re very likely to pass the year and likely to get a decent grade. The question for you though, is that good enough? Will getting a 2:1 help you get the job that you want? If so, you should probably consider increasing the time you spend in the library, using NOW and attending lectures.

Low
Firstly is your engagement low because you’ve been doing other activities in the past few days? You may have been on a trip, gone home for a few days or been revising. These things may cause your engagement score to drop temporarily. If so then just get back to your studies, use the library, check into NOW etc. However, if your engagement has been low for a while, or your grades are also low, then you probably should take this as a warning. We advise you to speak to your tutor as soon as possible (their name will be in the profile section of the Dashboard). There are some circumstances where engagement is likely to be low due to the nature of your study. If you are on placement, or a foreign exchange it is likely to be low. Part-time students may find that it is low in between study blocks, in these instances don’t worry that’s just the nature of your study.

Not Fully Enrolled
If your engagement is not fully enrolled at the start of term, then you need to complete the enrolment process. If you are described as Not Fully Enrolled later in the year, it means that you have withdrawn from your course.
Student profile

Profile Information

Entry Qualifications

<table>
<thead>
<tr>
<th>Year of Award</th>
<th>Qualification</th>
<th>Subject</th>
<th>Grade</th>
<th>Tariff Value</th>
<th>Tariff Value Ranking</th>
</tr>
</thead>
</table>

Engagement History

Engagement History - 2014/15
Help Page

Help and Support

Student Support

Support with personal issues

The Student Support Services web pages provides information, support and advice for students on a wide range of student support issues, a video about Student Support Services and phone numbers and email addresses for students to use to enquire about and access services.

Referral advice and support

Student Support practitioners are available to provide support and advice to staff on issues of concern regarding student wellbeing. This support includes working in partnership with tutors, taking on casework and assisting in developing "back on track" plans for students where these might be necessary.

Referral enquiries can be made by email to the Student Support Tutorlink mailbox or via phone to extension 86880 (0115 848 6880). For staff use only.

Technical Support

For Technical Support with the Student Dashboard please contact the Information Systems Service Desk.

You can send an email to support@ntu.ac.uk or phone internally to extension 8500 or externally on +44 (0)115 848 8500.
What does the staff view look like?
## Search function

- Designed so staff have easy access to student data.
- Allows staff to quickly identify potentially at risk students

### Search Results

**College**: COLLEGE OF BUSINESS LAW & SOCIAL SCIENCES  
**School**: SCHOOL OF SOCIAL SCIENCES  
**Programme**: BA(H) SOCIOLOGY FT

| Detail | First Name | Last Name | Student Number | Entry Quals | Age | Gender | Residency | Course Level | Course Name | Course Year | Study Mode | Disability Access | Repeating | Engagement Rating |
|--------|------------|----------|----------------|-------------|-----|--------|-----------|--------------|-------------|-------------|------------|--------------|------------------|-----------|------------------|
| Detail | Name       | Name     | No.            | A/AS level  | 18  | F      | HOME      | Undergraduate| BA(H) Sociology FT | 1           | Full-Time | N/A             | Not Repeating   | good           |
| Detail | Name       | Name     | No.            | Diploma at level 3 | 18  | M      | HOME      | Undergraduate| BA(H) Sociology FT | 1           | Full-Time | AS              | Not Repeating   | non            |

Links to student’s dashboard

Able to sort on headings
Tutorial Group View

Links to group of students in engagement category

SPPD11115_25638
Latest Engagement Ratings

Find a Group
Please select a group.

Find a Student
Enter your search term

Search

or browse alphabetically

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Dashboard
Search
Help
Logout
Any thoughts or questions so far?
How have we managed the development of the resource?
NTU Dashboard Pilot 2013-14

• Pilot Aims
  – Can the dashboard identify students most at risk of non progression?
  – Can staff and students use the resource?

• Pilot
  – Dashboard developed by DTP Solution Path
  – Schools of Business, Education and Social Sciences
  – Designed around the NTU academic tutor groups
  – Four first year courses, over 500 students
  – Training
  – Student live test
Staff and student research 2013

Student Transition Survey (March-May 2013)

• Both doubters (62%) and non-doubters (70%) felt an email from their tutor inviting them for a meeting would be the most useful support.

Staff online survey and interviews (November 2013)

• Variation in use by tutors
• Changed interactions with students in tutor groups
  – As I knew which students were not engaging with their ...I could contact them/follow this up. It was useful to have an email prompt re what to do, and information about how to contact the students. This felt quite empowering.
• Improvements to the Dashboard
  – Link it to attendance
  – General work on the glitches
  – Lack of information relating to admissions data
Implementation (2014 onwards)

- September 2014 – all Schools for undergraduate and postgraduate students

- Staff briefings and guidance
  - Introduction to learning analytics
  - Ethics
  - Explore good practice
Student research 2014 - 15

Student focus groups (2014)

- Familiar with being monitored
- Transparency - “I want to be able to see what is collected on me so I know what they can see about me”

Student Transition survey (February - March 2015)

- Is there anything NTU could do to encourage you to log into the Dashboard more frequently?
- Have you done anything differently as a result of using the Dashboard?
  - Changing behaviours including those that aren’t monitored
- How could NTU improve the Dashboard?
Student consultation

- Student Union
- IS Student Consultation Group
- Student research – surveys, focus groups
- Sept 2015-16 Student Dashboard Marketing Assistant
  - Student engagement panel
  - Ethics group
  - [Student introduction](#) to the NTU Dashboard
Student communication
How does it inform our work to address differences in attainment?
Relationship between average engagement & progression
1st year students only 23rd Sept 2013 – 6th June 2014*

Progression status by engagement rating (year 1 full time UG students)

<table>
<thead>
<tr>
<th>Engagement Rating</th>
<th>Other (n=76)</th>
<th>Withdrawn (n=310)</th>
<th>Transfer (n=143)</th>
<th>Repeating (n=364)</th>
<th>Academic failure (n=281)</th>
<th>Progressed (n=5,836)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low engagement</td>
<td>3.1%</td>
<td>18.5%</td>
<td>5.3%</td>
<td>12.4%</td>
<td>36.5%</td>
<td>24.2%</td>
</tr>
<tr>
<td>Satisfactory engagement</td>
<td>1.2%</td>
<td>4.0%</td>
<td>2.2%</td>
<td>6.2%</td>
<td>3.1%</td>
<td>83.4%</td>
</tr>
<tr>
<td>Good engagement</td>
<td>0.7%</td>
<td>2.8%</td>
<td>1.1%</td>
<td>2.0%</td>
<td>0.8%</td>
<td>92.5%</td>
</tr>
<tr>
<td>High engagement</td>
<td>0.2%</td>
<td>4.0%</td>
<td>1.3%</td>
<td>2.5%</td>
<td>0.4%</td>
<td>91.7%</td>
</tr>
</tbody>
</table>

* Data provided by Mike Kerrigan, NTU
Relationship between engagement and attainment (Final year UG students 2013/14)

### Final degree awards by engagement classification

<table>
<thead>
<tr>
<th>Engagement classification</th>
<th>low</th>
<th>satisfactory</th>
<th>good</th>
<th>high</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Class Honours</td>
<td>13.2%</td>
<td>15.2%</td>
<td>20.9%</td>
<td>28.0%</td>
</tr>
<tr>
<td>2nd Class Honours-1st Division</td>
<td>28.6%</td>
<td>47.0%</td>
<td>55.2%</td>
<td>52.5%</td>
</tr>
<tr>
<td>2nd Class Honours-2nd Division</td>
<td>28.6%</td>
<td>30.5%</td>
<td>21.5%</td>
<td>17.0%</td>
</tr>
<tr>
<td>3rd Class Honours</td>
<td>11.0%</td>
<td>4.9%</td>
<td>1.4%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Other - Ordinary Degree</td>
<td>18.7%</td>
<td>2.4%</td>
<td>1.1%</td>
<td>0.6%</td>
</tr>
</tbody>
</table>
Implications of research findings

• Low engagement as recorded by the dashboard correctly identifies students most at risk of
  – Withdrawing from study
  – Academic failure
  – Achieving inferior degree classification

• And low engagers are disproportionately
  – Male
  – BME
  – WP
  – BTEC entrants

• Hence, we can target student behaviours, rather than student characteristics
Informing student success provision

• Success for All
  – 9 pilot projects developed in 2014/15
  – Action research extended to 2015/16 and beyond
  – Establish ‘what works’ to address differences in attainment

• BTEC Champions
  – University wide initiative
  – Identify, plot and evaluate interventions aimed at supporting BTEC entrants
  – Closely associated with ‘Success for All’
  – BTEC Symposium 15 September 2016
What are our plans for next phase?
Ongoing tasks related to Dashboard

- Promotion to students
- Staff training
- IT infrastructure
- Management Processes and quality
- Data analysis
Development of the Dashboard based on feedback

- The Dashboard will be adapted based on student and staff feedback
  - Improve accessibility:
    - Improve layout
    - Make app version
  - Give attendance data higher visibility
  - Add to entry qualification reporting
  - Build in use of new data sources into algorithm
  - Improve system for students with non-standard start dates
  - Improve mapping of students to tutors

Student Survey Jan 2016
Incidence of comment (%), n=133
2016/2017 - Integrating Dashboard into institutional working practices

- Trial different aspects of the Dashboard with staff from different schools.

- The following are under discussion:
  - Pre-arrival task
  - Personal goal setting
  - Alerts
  - Use of notes pages
  - Appointment booking tools
  - Monitoring of low engagement
  - Reporting tools
ABLE Project – Achieving Benefits from LEarning analytics

The ABLE Project will identify, research, and recommend successful interventions once learning analytics have identified that a university student may be at risk of early departure or underperforming. Learning analytics is only as useful as the actions it instigates.

Project partners:

Universiteit Leiden
KU Leuven
Nottingham Trent University

Find out more:

Project website coming soon (August 2016) - www.ABLEProject.eu
Twitter page - @ABLEproject_eu
Thank you for listening, any questions?

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(sarah.lawther@ntu.ac.uk)  
Rebecca Edwards – ABLE Project/ Student Dashboard  
(rebecca.edwards@ntu.ac.uk)
References


• JISC Inform. How can I use analytics to benefit my students? [online]. Available at: http://www.jisc.ac.uk/inform/inform36/mobile/QandA.html [Accessed 5 March 2014]


