



Universiteit  
Leiden

**KU LEUVEN**

NOTTINGHAM  
TRENT UNIVERSITY 

# **ABLE Project**

## **2015-1-UK01-KA203-013767**

### **Output 08: Institutional Case Studies**

**Nottingham Trent University – Non-submission alerts  
2017/18**



Funded by the  
Erasmus+ Programme  
of the European Union

# **Output O8: Institutional Case Studies**

## **Nottingham Trent University – Non-submission alerts**

### **2017/18**

The three partner institutions start this project in different national contexts with differing sets of priorities. Importantly they start the projects with different levels of experience in the use of learning analytics.

Therefore, we will write three project case studies describing the work conducted. These will be written to aid our own reflection, but also to guide other institutions interested in utilizing learning analytics to support their students.

We will agree a common structure to help readers learn quickly the lessons from each case study.

*"The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein."*

This output is a result of the European [Erasmus+](#) project [ABLE \(2015-1-UK01-KA203-013767\)](#)

Co-funded by the  
Erasmus+ Programme  
of the European Union



## Table of Contents

1. Project Definition .....	2
2. Description of work undertaken .....	2
3. Evaluation and results .....	4
4. Lessons learnt and Conclusion .....	4
5. Contact Details .....	5
6. Appendices.....	5

## 1. Project Definition

The aim of the pilot was to test whether or not it was possible to use the NTU Student Dashboard to generate automatic alerts when a student had missed a deadline. The alerts would be sent to the students' personal tutors encouraging them to contact students, offer additional support and encourage them to submit the coursework whilst there was still a chance to achieve a grade (albeit a capped one)<sup>1</sup>.

The Student Engagement Team (SET) was interested in this strategy for several reasons:

- Firstly, the Dashboard provided the capacity to generate automatic alerts.
- Non-submission could similarly provide an effective early warning that a student is experiencing issues or has some misunderstanding about an aspect of learning.
- In addition to improving big picture understanding, there was an immediate and direct benefit to the student. If a student submitted the coursework within 10 days of the deadline they would still receive a capped mark (40/100) and still benefit from feedback.
- Starting to focus on non-submission allowed the team to experiment with new data sources to the algorithm. At present, the Dashboard counts that coursework has been submitted, but not the opposite: the systems are not yet connected in a way that allows the Dashboard to know that an assignment was due. In the long term, non-submission may be a more useful data source than submission.
- Finally, the alert could be visually displayed in the Dashboard providing further contextual data for the tutor and student.

Learning analytics was thought to be useful in this case as a means to store the data about non-submission alongside other contextual information about the student, to better enable student self-reflection about their engagement with the course and to better enable personalized support from staff members. In particular, storing the information where a personal tutor could easily view it, alongside non-engagement alerts already generated in the Dashboard (see case study 4: [No engagement alerts](#)) and any notes/actions made with the student after alerts, was thought to be particularly valuable.

Success would be defined by:

- Accurate generation of the alerts
- Reliable emailing of the alerts to personal tutors
- An increase in the number of late-submissions
- Staff feedback about the usefulness of the alerting process and displaying the alert data in the Dashboard

## 2. Description of work undertaken

In the 2017-18 year the Student Engagement Team (SET) had hoped to pilot non-submission alerts for the first time. Non-submission alerts were to be based on electronic

---

<sup>1</sup> At NTU, assignments can be submitted up to a ten days late, but the grade will be capped at the equivalent of 40% (a pass).

submission of coursework via the University's Virtual Learning Environment (VLE); called "NOW". Following a successful pilot alerting staff, the SET planned to look for ways to alert students directly, to maximise the amount of time they had to submit within the 'late submission' deadline. In order to set up for this pilot the SET met with a number of key stakeholders:

- Information Systems (IS) staff with responsibility for NOW
- Business Intelligence staff (responsible for data transfer)
- The Learning and Teaching Manager from the proposed pilot school

During the initial conversations about producing non-submission alerts, a number of key complications were highlighted:

1. In the past there has been no need for a standardised way to set up folders for online submission, so there is variation in practice between and within the different academic schools. There may be multiple folders per submission e.g. for an optional draft or to test the work for plagiarism (using [Turnitin](#)) ahead of submission, and the final submission folder is not marked in a consistent manner.
2. Handling students with extensions (systematic extensions due to disability and/or one-off extensions due to exceptional circumstances e.g. a student being ill) may be difficult due to different practices in this area: some academics set up separate folders for these students to submit to, some academics set up folders with a due date (for when normal submission is due) then an end date (by which time all submissions should be made), etc. Ideally, the system would not produce false alerts for students with known extensions, so there needs to be either a way to inform the system of the extensions or a way to mitigate against this risk by informing staff of the possibility of extensions and where to find further information.
3. Some coursework/assignments are group work. In these cases, submission is generally completed by one student on behalf of the group, so electronically it appears as though other group members have not submitted anything.
4. Formative and summative work (work that doesn't count towards end of year grades and that which does, respectively) are not necessarily easily distinguishable based on how the folders are set-up but may be handled differently in terms of following-up on non-submission.

With these points in mind, the SET aimed to pilot non-submission in a school which had already initiated the use of a standard folder set-up that had previously been generated by central IS. The plan was to focus on two key submissions for a core module; one in first term and one in second term, so the stakeholders could review the process after the first and make any necessary adjustments for the second. The perceived advantage of working with a small group was that it would also be easier to convey the message that this was a pilot and there may be some things to keep in mind when contacting students based on the alerts (e.g. that the student may have been granted an extension).

The following information was required:

- The name of the assignment and deadline
- The name of the student who should have submitted it
- Whether or not that student actually submitted the work
- Who should be contacted to follow up on non-submission

This required input from all the stakeholders listed above and required not only a data feed from NOW/Dropbox but also access to the student-tutor mapping data, and staff email addresses. The external providers of the Dashboard, [Solutionpath](#), were required to code the non-submission alerts based on the data feeds and the text template provided by the SET (see Appendix A), and code the generation of a record of the non-submission alert in the dashboard. The central Information Systems testing team were required to test and sign-off the system ahead of piloting.

### **3. Evaluation and results**

Despite best efforts, this pilot did not take place in the 2017/18 academic year. This was due to the data reliability issues with the Dashboard during the first term. It was agreed that these were a greater priority than the pilot. This work delayed the necessary preparation and testing to such an extent that the pilot was not possible.

The inability to run this pilot is an example of the difficulties of working with technology at the forefront of the field. The learning analytics dashboard was rolled out across NTU in 2014-15, so issues with data may not be expected from an outside perspective, but as learning analytics is a new field, the Dashboard has not been a static tool throughout this time; instead it has been through a series of developments in line with user feedback. A number of systems within NTU have also been updated since 2014-15, changing the data that is sent through. In the 2017/18 academic year, both a new version of the dashboard was deployed, and two additional data feeds (attendance and e-resource usage) were incorporated into the engagement algorithm. Attendance and e-resource data had been displayed in the dashboard throughout the previous year, but the impact of having the data also feeding into the algorithm in addition to displaying the data was underestimated, and only became apparent once term one was running to full capacity (due to the minimal data load over the summer vacation period). Equally, the update of NTU's visual learning environment (VLE) over the summer caused a knock-on issue, as the change in API meant that in some instances ~3000 times more data was being produced than in the previous year. The combination of additional processing and additional data meant that on a semi-regular basis the data processing took longer than expected, and overlapped with other processes, causing a breakage in the processing schedule. As the data is core to the functioning of the dashboard, these processes were naturally prioritized over running the pilot.

### **4. Lessons learnt and Conclusion**

The major learning points from this case study were to appreciate the difficulties of working with changing technology and data sources, and to build that knowledge into stakeholder communications, particularly around the ability to set up and run pilots.

Non-submission alerts on the face of it, may appear a simple thing to generate, but the insights gained during the set-up of the case study demonstrate the broad range of considerations that need to be considered when running such a pilot. This information

will be extremely valuable for when non-submission alerts are piloted in the system, hopefully in the 2018/19 academic year.

## **5. Contact Details**

For further information, please contact the following people:

- Ed Foster, Student Engagement Manager, School Colleges and Community Outreach, Nottingham Trent University, [ed.foster@ntu.ac.uk](mailto:ed.foster@ntu.ac.uk)
- Rebecca Edwards, ABLE Project Officer, School Colleges and Community Outreach, Nottingham Trent University, [rebecca.edwards@ntu.ac.uk](mailto:rebecca.edwards@ntu.ac.uk)

## **6. Appendices**

- Appendix A: Template for non-submission email