# Assessment, Feedback & Technology

## Contexts and Case Studies in Bloomsbury

### Edited by

# Leo Havemann & Sarah Sherman

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Chapter 1
# Contextualising the Electronic Management of Assessment Lifecycle in Bloomsbury

# Chapter 1: Contextualising the Electronic Management of Assessment Lifecycle in Bloomsbury

Leo Havemann[1]
Sarah Sherman[2]

## Introduction

"Teachers have traditionally used assessment to act as both goal and feedback for the learner" (Laurillard, 2001, p.58). Assessment and feedback are core to student learning, and 'the student experience' of higher education. In recent years, we have seen an increasing interest across the sector in Assessment *for* Learning (AfL), rather than simply *of* learning (HEA, 2012). In addition, assessment is increasingly being submitted, being marked or entirely taking place online, usually because of the affordances of technology in managing processes more effectively and efficiently.

In recent years, UK agencies such as Jisc, the NUS and the HEA have dedicated significant research and project resources into the enhancement of assessment and feedback. The NUS has argued that institutions must consider ways of making university administration more efficient through technology including online submission of assessment (NUS, 2010), and that the use of technology in institutional administration simplifies and improves processes, including assessment and feedback (NUS, 2011). Beyond these kinds of administrative gains, there is evidence that learning technologies are playing a significant role in the transformation of assessment pedagogy. For Jisc (2010), a holistic approach which considers the technical, administrative and pedagogic elements of assessment and feedback is necessary.

If it is now understood that well-designed assessment and timely, forward-focused feedback are essential components of a desirable 'student experience', then enhancement of assessment and feedback practices must be regarded as a priority. Within the institutions that make up the Bloomsbury Learning Environment (BLE) Consortium, there has been increasing interest in this area. Sector-wide, institutions have been grappling with low scores for feedback in the National Student Survey: "students express concerns about the reliability of assessment criteria, challenge the fairness of their experience and say they are dissatisfied with the nature and timing of feedback" (HEA, 2012, p. 10).

To address this locally, the BLE Consortium launched a project in September 2014 to investigate online assessment and feedback processes, practices, opportunities and technologies available to the partner members known as the 'Bloomsbury Colleges' (Birkbeck, UCL Institute of Education, LSHTM, SOAS and RVC). The purpose of the Bloomsbury Enhancing Assessment and Feedback Project was, first of all, to map current 'typical' practice from across the consortium in the use of learning technologies in assessment and feedback; and, furthermore, to discover and disseminate innovative approaches via events and case studies that showcase how technology can improve assessment. There are good examples of widespread adoption of technologies, and also of innovative assessment design which have already been developed within the BLE, and our intention was to surface this work in order to encourage and inform replication and modification.

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1   Leo Havemann, Learning Technologist, Birkbeck, University of London.
2   Sarah Sherman, Service Manager, Bloomsbury Learning Environment.

In this paper, we report on the first strand of the project in which we set out to gain an overview of current practice. We have been fortunate that our concerns in this project have significantly overlapped with those of the Jisc Electronic Management of Assessment (EMA) programme, and, consequently, we have been able to benefit from the work Jisc has produced on behalf of the sector. In order to map our data on EMA practices against a relevant framework, we adopted Jisc's (2016) assessment lifecycle, originally developed by Manchester Metropolitan University (Forsyth, Cullen, Ringan and Stubbs, 2015); see Figure 1. The lifecycle is an end-to-end model of the stages of the assessment and feedback process, which enables consideration of distinct areas of assessment activity and the associated technologies. Sub-processes include: assessment scheduling; submission of assignments; tracking of submissions; extension requests and approvals; academic integrity; academic misconduct processes; examinations; marks recording; moderation and external examining (Jisc, 2016). Using this framework, we have been able to categorise practices to demonstrate the various ways in which technology impacts, supports and enhances the various stages from setting and submission through to marking and providing feedback.
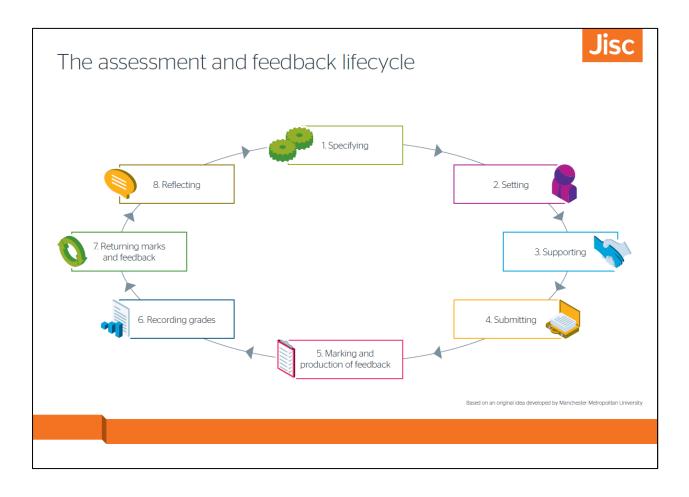


Figure 1: The assessment and feedback lifecycle (Jisc, 2015)

## Approach

### Data collection

There had not previously been any research carried out across the Colleges of the BLE Consortium which attempted to collate the various technological approaches to managing assessment and providing feedback, either already in use or under consideration. Anecdotal evidence tends to point to both diversity and complexity in assessment and feedback practices (often even within a single institution), and it is difficult to be sure exactly *how* diverse or complex such practices are. Therefore, we developed a matrix, which was shared with staff responsible for supporting learning technologies within the Colleges for completion.

### Analysis

As EMA practices continuously evolve, this paper aims to explore a snapshot, captured at the time of data collection, across the campus-based and blended programmes within the BLE Colleges. As discussed above, a key element of the Jisc EMA work has been the framing of assessment and feedback practices in terms of the assessment lifecycle. We have structured the discussion of the findings around the elements of the lifecycle, about which there is more to say on some than others. When collecting the data, we did not start with the intention to research the assessment lifecycle itself, but rather to simply map current assessment practices to the technologies used to support them. However, once we had collected the data, we concluded that the lifecycle provided a productive analytical framework. The following sections describe each stage and corresponding examples from the Colleges.

## Findings

### Specifying

*Specifying* is the process of determining the details of a course or programme of study and consequently the assessment strategy within it (Jisc, 2016). While the fields in our matrix did not really address the specifying stage in the lifecycle, our project as a whole aims to influence assessment strategies. An aspect of the project was to capture and highlight innovative practices in technology-enhanced assessment, in order to share examples and advice with academics and ultimately support the assessment design process. The HEA (2012) concurs with Jisc in highlighting the importance of a programme-level approach to specifying assessment. A key challenge here is that assessment design is usually agreed a long time in advance, at the time of course/module approval.

### Setting

*Setting* assignment details needs to happen each time a group of students takes a particular module; this is often known as an instance of delivery. Early on in the lifecycle of an assessment, a decision point must establish the key features and format of the assignment, e.g. formative or summative; online or offline; coursework or exam; weighting; and timing. It is therefore an outcome of the setting process that students receive details, usually in the form of an assignment brief, about precise topics, deadlines, learning outcomes assessed, marking criteria and feedback arrangements (Jisc, 2016). From the perspective of this project, we were particularly interested in the processes involved in deciding whether to conduct assessment online or offline.

It is not always possible or appropriate to complete assessments online. A good example of an assessment that is not suitable for online submission is the Objective Structured Clinical Examination (OSCE), which assesses the practical skills of final year veterinary students; similarly, we are not tending to see performances, artwork or laboratory-based experiments assessed online. Transposing a written exam into an online environment may be considered too high risk or complex. Concerns around students proving their identity are commonly expressed in relation to online examinations in particular, although this unresolved tension exists in offline assessment too.

Examples of assessment types that *are* supported by technological approaches include quizzes, such as Multiple Choice Questions (MCQs), which are set up within Moodle and are used frequently by Birkbeck, LSHTM and the RVC. The availability of instant, tailored feedback provided to the student is very powerful, and so are the facts that MCQs can be accessed any time, any place and used in private, multiple times. At the RVC, students are creating their own 'flashcards' for self-study, which lends an additional learning dimension. The benefits of these types of assessment have been examined informally by the Colleges that use them. The ability to provide instantaneous, automatic marks and produce statistical analyses are all great benefits. However, a major drawback is that it can be time-consuming to create good questions (although once the time has been invested, they can be re-used). Additionally, it is hard to assess higher-order skills when deploying these types of formative assessment.

Across the Colleges, there is little evidence of the use of online *summative* assessment (e.g. online exams). SOAS has some experience of running practice essays conducted online, but it is not very widespread. Similarly, the RVC's Continuing Professional Development Unit has experience of managing open book MCQ quizzes in Moodle (randomised questions, categorised by topic and level of difficulty, drawn from a wider repository), but this is not mainstream for the whole College. A growing number of suppliers of online examinations now exist, but a lack of resourcing and strategic drive have been obstacles within the Colleges to investigate the options. The Bloomsbury Enhancing Assessment and Feedback Project provided the opportunity to organise collective demonstrations of the options available.

## Supporting

This component looks specifically at supporting students during the period between Setting and Submitting assignments, i.e. while they are in the process of completing an assignment; it has a relationship with the broader information and digital literacies agenda for both staff and students (Jisc, 2016). Supporting students' ability to understand the *language* of assessment and assessment processes (known as assessment literacy) has been described by the HEA to be fundamental in helping them to appreciate "principles of sound assessment, the relationship between assessment and learning, and the nature of professional judgement". Therefore, it is recommended that students be clearly informed about the assessment 'safeguards', such as second marking, moderation and external examining (HEA, 2012, p. 14).

The originality reports generated by Turnitin[3] are used by some Colleges as formative exercises for students to develop their writing abilities while drafting their assignments reports; students are therefore encouraged to self-check. Some academics choose to allow students to see the results of the reports, allowing for resubmissions and/or late submissions, while others do not. There is a sentiment at the UCL Institute of Education in particular that Turnitin should be used to help to empower students rather than to identify students who are plagiarising. At the RVC, students are encouraged by their tutors to examine their own originality reports, which are made available to them. Several 'draft' submission areas are provided where students are encouraged to submit draft copies of their work prior to the final version. At SOAS and LSHTM, guidance is available to students to help them understand how to use Turnitin and how to interpret the originality report.

Here, the difference between formative and summative assessment types is important: formative assessments are primarily about supporting students to learn and ultimately to perform better in later summative assessments. Understanding where rapid formative assessments fit into the lifecycle has been a challenge, as these arguably encapsulate the entire lifecycle, including feedback. Personal Response Systems are used by several of the Colleges to collect student's responses to formative assessments live in classrooms. These systems are useful as they provide support to students in testing their knowledge and, therefore, preparing for future, high-stakes assessments. However, their use has been limited since academics often have to organise and set up the technology themselves. At the RVC, TurningPoint is supported institutionally, but some academics have experienced technical problems, which put them off trying again; conversely, a few successful academics have persisted and continue to use it very effectively. At the time of writing, LSHTM staff had been given access to PollEverywhere, and were testing it out to gauge student understanding and gather feedback.

In terms of assessment practices which support students' assessment literacy, we are seeing growth in Bloomsbury in the use of peer assessment and feedback. Peer assessment enables a deeper understanding of a topic, encourages engagement in group work and supports and improves the student's assessment literacy, allowing them to grasp what is expected of them. In terms of providing opportunities for peer assessment, where the students mark each other's assessment, the UCL Institute for Education has examples where this is built into some formative activity designs. At Birkbeck, Criminology students give and receive peer feedback on drafts as part of an academic blogging task (see the case study by Guetcherian, Chapter 14). At the RVC, the Moodle Workshop Tool and WebPA application have been used for peer assessment (see case studies by Sherman and Channon, Chapter 10, and Croall, Cobb, Lawson and Spark, Chapter 11). In general practice in Bloomsbury, however, peer assessment techniques are *not* widely used; one argument has been the assumption that students don't appreciate or trust their peers' feedback.

## Submitting

*Submitting* is the process of students handing over their completed assignment so that marking and/or feedback can take place (Jisc, 2016). This appears to be the area of assessment in which the use of technology has become the norm rather than the exception (although its use is by no means universal). In this stage, we examined the use of online submission for written coursework as formative and summative assessment. The native Moodle and integrated Turnitin assignment tools are used across the Bloomsbury Colleges (to varying, mixed degrees) to enable electronic submission. The vast majority of Birkbeck coursework and all essays at SOAS are submitted via Turnitin. At SOAS, students can submit as many times as they wish before the assignment due date in order to view the originality report and self-check their work (see 'Supporting'). While electronic submission can certainly bring advantages in terms of saving students and administrators time in the production, delivery and processing of hard copies, it

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[3]  Turnitin is a commercial platform for assignment submission and 'similarity checking' (in order to detect or deter plagiarism), which also offers online marking and feedback functionality.

tends to create a significant support workload for IT helpdesks and learning technology teams, and of course administrators, who experience new demands on their time.

At the time of writing, the Coursework plugin for Moodle was being developed and trialled at the RVC whereby assignments were submitted via Moodle and marked online (see Chapter 27 by Sherman and Spark). Turnitin is used extensively at the College in summative assessment for plagiarism detection only; this has become mandatory policy. Two high-stakes research projects that are submitted by students enrolled on the largest course at the RVC (the veterinary medicine undergraduate course) rely heavily upon Turnitin, and the Coursework plugin. A dedicated teaching session before this submission is due takes place to assist students with their academic writing skills and how to use Turnitin. At the time of data collection for this review, paper copies at the RVC were still required in some instances. LSHTM had completed pilots of submission of formative essays via the Assignment tool, but intended to scale up online submission using the Coursework plugin.

Although Moodle and Turnitin support submission of various file formats, the majority of submissions are documents. Exceptions to this exist in subject areas where the assignment is to produce a certain type of file or dataset (for example, computer science, where a submission might consist of code). A growing subset of formats which is less subject-specific is sound and video based assignments: at Birkbeck, this has been occasional, but is starting to increase (see the case study by Grange and Hein, Chapter 4); at the UCL Institute of Education, some specialist modules require the submission of self-made films, animations and audio recordings; at SOAS, some language courses require students to submit podcasts for formative assessment. Our existing learning and assessment technologies provide opportunities to explore these options more widely, but training and support for both teaching staff and students are required.

## Marking and production of feedback

This crucial stage describes the ways in which submitted work is marked by tutors against evaluation criteria and the ways feedback is produced. While marking and the provision of feedback are often performed at the same time, they can be understood as distinct functions. It is often in this aspect of the lifecycle that we see variation across institutional, local and perhaps disciplinary practices; for example, in the application of anonymity and moderation or double marking.

Turnitin's GradeMark feature is used extensively at Birkbeck and SOAS in particular, for managing the marking process and providing written feedback. At the RVC, GradeMark is used to mark formative assessment and the Coursework plugin is used when assignments are required to be annotated online and double-blind marked. Alternatively, at the UCL Institute of Education, comments for summative assessment have often been produced on a Microsoft Word pro-forma document. However, more recently, feedback is required to be returned via the Moodle Assignment plugin, although use of email for returning feedback is still widespread. LSHTM ran a pilot of feedback delivery via the Moodle Assignment tool, also requiring the use of a Microsoft Word pro-forma.

*How* marking is actually carried out by teaching staff varies between the Colleges. For example, online marking in Turnitin GradeMark (including via the iPad app) is quite common at Birkbeck; some tutors prefer to download the assignments in order to use the track changes feature in MS Word. On the other side of the spectrum, paper-based marking still prevails at the UCL Institute of Education; offline but on-screen marking on desktop computers and laptops is, however, on the increase. Again, online marking is limited to GradeMark. At SOAS, all assignments which are submitted via Turnitin are marked online.

Across the Colleges, there has thus far been limited use of audio and video feedback. The occasional use of the Campus Pack podcasting tool in Moodle has been made at SOAS in language classes.

## Recording grades

Once marking has taken place – often by more than one marker – the grades have to be collated and a final mark decided upon. As Jisc (2016) notes, "Institutional regulations will determine who records the grade, how this is verified and in which system it is stored. However, in most cases, the student record system is the definitive source of grading information" (p.17). Integration between Moodle/ Turnitin GradeMark and the institutional student record system has been most formally developed at SOAS (see Chapter 25 by O'Sullivan and Leedham). There, grades added to GradeMark within Moodle are passed in bulk, on demand, into UNITe (SOAS's student record system) using a locally developed plugin. At the UCL Institute of Education, a similar integration project is also underway. An automated update of student records from Moodle and/or Turnitin is not seen as desirable in these cases as student records are regarded as the official and definitive repository of final grades, as determined by exam boards. At the RVC, integration between the systems is not currently required; the manual input of marks is performed by the Exams Office.

## Returning marks and feedback

This stage is the most important from the student's point of view, as it describes the way in which they receive their marks and feedback. In Bloomsbury, again, there is a widespread reliance on Turnitin as the location for marks and feedback to be stored and provided to students. Although Turnitin allows for audio feedback to be given, there has been very low uptake of this option. A very low number of students will be presented with audio-visual files containing their feedback or via a podcast feed (in the case of SOAS's Language Centre). The availability of alternative, digital forms of feedback (for example, audio feedback for language students) might increase levels of satisfaction and increase student engagement with it. Constraints of time, resourcing and support requirements appear to be barriers to adoption.

## Reflecting

The final stage of the lifecycle is said to be where the *real* learning takes place as students consider their marks and feedback in the context of the learning objectives in order to reflect on their progression. In fact, Jisc argues that it is vital that students "engage with their feedback and use it to improve their future performance" (Jisc, 2016, p.20). Teaching staff also use this time to reflect on how they can reshape the curriculum or teaching content to affect future results.

A good example illustrating the Reflecting stage comes from the UCL Institute of Education (UCL IOE) which, as part of its Jisc-funded Assessment Careers project,[4] developed a feature in Moodle to allow teaching staff to access all the comments and feedback made to individual students of all their assessed work. This allows a tutor to identify any commonalities or concerns about individual students and enables appropriate interventions to be made. Building upon this, UCL subsequently enhanced the feature by enabling the students themselves to view all their feedback in one place (see Chapter 26 by Gramp). This enhancement allows a greater opportunity for students to actively take account of the feedback they get on an ongoing basis.

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[4]   See: For more information see: Assessment Careers Project (IOE/JISC) (video). Available:
     *https://www.youtube.com/watch?v=sx_j2VPMiE0.*

The UCL IOE also explored the potential of using two feedback cover sheets under two key objectives: firstly, to improve the relevance of feedback provided to students; secondly, to encourage students to make use of all the feedback they receive from staff with a feed-forward, 'action on feedback' component, which asks students how they addressed any feedback on an earlier version. The feedback cover sheets allow for a dialogue between staff and their tutors to open up. Students receiving detailed written feedback on complete drafts of all work is very specific to UCL IOE practice rather than a sector norm, but the two feedback cover sheets can be used in any case where students receive formative feedback before a summative assignment. For the first formative assignment, students completed a feedback cover sheet self-evaluation at the time of submission to collect their reflections on the assessment.

At the formative stage, the feedback cover sheets asked students to complete the following statements:

> – What have you done well in this assignment?

> – What could be improved?

> – Is there anything you specifically want feedback on?

At the summative stage, the Student Feedback Response Form asked students:

> – Thinking about the feedback on your draft (previous) assignment, please indicate what the key points were. For each point state what action you took to respond to this feedback in preparing the final version of your assignment. Your response will help your assessor identify the progress you have made and suggest further action to help you develop.

Initially, staff were concerned that the feedback cover sheets might cause additional workload. In terms of using the feedback cover sheet for formative work, the IOE concluded that a certain amount of 'assessment literacy' was required to use them, with the higher achieving students more able to self-assess, but staff concerns were allayed and they valued the insights from students' self-assessment. In terms of the cover sheet for summative work, staff found student accounts of what they had done as a result of feedback a very helpful starting point for addressing their feedback.

## Conclusions

Considered planning of assessment practices benefits both students, staff and an institution as a whole. Exposure to a variety of assessment approaches and formats reinforces learning and plays to learners' different strengths, providing experiential and authentic assessments (see the case study by Sherman and Rofe, Chapter 13). For staff, exploiting technology for the setting and marking of an assessment can, in the long term, reduce workload. In the case of the institution, integrating platforms, such as students record systems and Moodle-based assessment tools (as can be seen at SOAS), is very valuable in terms of reducing staff time spent on manual data-entry and the associated risk of errors.

The lifecycle used in this paper provided a very helpful structure to define and describe the various assessment elements and sequences. Much of the lifecycle can potentially be managed and supported by deploying electronic systems, but practice across Bloomsbury is quite variable. The key stages that are enhanced by the use of technology are Submission, Marking and Production of Feedback. The analysis of our data in the context of the lifecycle has provided a useful starting point for investigating EMA in Bloomsbury, but more work could usefully be undertaken across all the stages. We initially

used the lifecycle as a structure to frame data we had already collected rather than to ask questions specifically appropriate *for* the lifecycle.

The lifecycle framework has helped to identify ways in which the Colleges can use technological approaches to manage assessment practices to the benefit of all key stakeholders. Therefore, it is recommended that course directors and designers are encouraged to consider, review and challenge their own assessment methodologies and the way they design assessments. The HEA (2012) paper on assessment remarks on the importance of assessment design for influencing the quality and amount of learning achieved by students. It concludes that assessors need to consider a range of assessment methods to "improve their validity, authenticity and inclusivity, making them clearly relevant and worthwhile in the eyes of students" (HEA, 2012, p.17).

The examples provided in this paper reveal a high level of dependency on reliable, stable technology, in particular on Turnitin, which is a third party, commercial platform. The high-stakes nature of this dependence poses a risk (e.g. technical failures or commercial collapse) as well as offering an opportunity as this integration provides flexibility and additional functionality. For less high-stakes assessment, Personal Response Systems can be used to effectively represent a complete 'mini-cycle' comprising the Setting, Submitting and Feedback stages in a rapid way.

The decisions made at the crucial Setting stage, regarding whether or to what extent an assessment will be managed online, does not appear to be made on a consistent basis across - or even within - the Colleges; there is clearly still potential for the development of policy and guidelines regarding good practice in this area. However, the collaborative approach of the Bloomsbury Enhancing Assessment and Feedback Project has provided a rich and wide pool of experience from which to extract working examples of using online assessment methods. The BLE Consortium has a long history of sharing good practice between colleagues across the membership base, and it is hoped that further work in the field of EMA in Bloomsbury will continue in a similar, joined-up spirit.

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