

How to help engage students in flipped learning: a flipping eventful journey

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Summary

This case study example focuses on the use of flipped learning as a teaching method in Higher Education. The term flipped learning can be described as follows:

“In the flipped classroom, instructors prerecord lectures and post them online for students to watch on their own so that class time can be dedicated to student-centred learning activities, like problem based learning and inquiry oriented strategies” (McLaughlin J et al 2014).

Flipped learning allows for the in-class time to focus on higher order cognitive skills (Little, C 2015) i.e. it allows students to apply the higher levels of Blooms Taxonomy (Bloom 1956), such as the skills of analysis and evaluation, rather than not progressing beyond comprehension and knowledge. Therefore, the supporting literature suggests that deeper learning is achieved as a result (Orsmond 2004), and the ability of students to achieve a wider range of learning skills is encouraged (Bergmann and Sams 2012).

A flipped learning model of teaching was applied within the context of a final year undergraduate module, entitled Sale of Goods, on the law degree programme at the University of Sheffield. The module has been run as an elective module for a number of years, but since September 2015 the module ran using a flipped learning model.

In the 2015/2016 academic year, ‘traditional’ tutor led lectures were replaced with online screencasts (audio over PowerPoint slides) and lecture time was adapted to become student-centred large group interactive sessions. The primary motivation for introducing a flipped model of delivery was to encourage greater engagement from the students in their learning experience, in particular increased active learning rather than passive learning. Following this, in 2016/2017 continued work and development of the module was undertaken, including better scaffolding and signposting of the flipped learning resources, development of screencast content and length, and increased interactivity built into lecture time.

Volunteer students from the 2016/2017 cohort undertaking the module were asked to engage in 30 minute one-to-one interviews after undertaking the module, and qualitative comments were collated by the author. Funding was obtained from the University of Sheffield fund for learning and teaching in order to carry out these interviews, transcribe the interviews and analyse the results. These results will be considered in this case study. This case study also draws on academic literature to compare perspectives of incorporating this method of teaching into the HE curriculum.

This case study summarises the reasons for implementing a flipped learning model, together with the key findings from such implementation. The key conclusions focus primarily on the potential benefits of incorporating flipped learning into teaching, with the central benefit being increased engagement from students. There are also comments on some of the challenges of this teaching method – the central challenges being the need for consistency and clear signposting, together with a large investment of time by staff in implementing such a teaching method.

Description of project

The 'Commercial law-sale of goods' module offered as an elective module within the LLB law degree at the University of Sheffield, previously consisted of 20 one-hour traditional lectures (tutor led sessions, where slides are delivered and students take notes), and 6 two-hour seminars (smaller group sessions, where students discuss, analyse and present on problem questions and wider discussion questions), over the autumn semester of a final year LLB undergraduate law degree. The module is a very popular choice for students on the LLB law degree each year, and has been run successfully for over 10 years. Prior to the changes made to this module, flipped learning has not been incorporated at all into any module on the LLB law degree at the University of Sheffield.

To undertake a full flipped learning model, it was decided that the traditional taught lectures be recorded as screencasts (that is, lecture slides with an audio commentary) and embedded within the Virtual Learning Environment ('VLE') available to students. Each module on the LLB law degree programme has a separate area on the VLE, and a variety of content can be uploaded for access by those students enrolled on the particular module. The 20 lecture-room bookings were kept, but were renamed as 'interactive lectures'. The six, two hour, taught seminars were also maintained.

The flipped learning model allowed the students to have a pre-class introduction of the key concepts and issues they would need to address and consider when undertaking their independent reading for the module. It then allowed the existing lecture time to be used very differently. This time became used for interactive sessions where questions were posed of the students so that (a) students could debate and discuss their learning with their peers; and (b) student answers to the questions allowed the tutor to assess the students' knowledge and understanding of their prior learning. This enabled the tutor to immediately respond to the level of understanding shown in the interactive sessions. After each answer was given by the students in the interactive session the tutor would provide feedback to the students – this feedback was shaped and focused by the initial student input.

Prior to the commencement of the flipped learning model in October 2015, the tutors on this module (there were two tutors teaching on this module) scripted and recorded screencasts using PowerPoint to display and order through the slides, and 'Articulate' or 'Explain Everything' software to record the audio commentary – so that the final product was a set of slides listing the main issues, and an audio commentary drawing out the main themes and points. The original intention was to provide one screencast to replace each traditional lecture. However, given the technical nature of the legal points mentioned within each traditional lecture, more

than one screencast was often produced grouping related concepts and constructs together. This allowed the screencasts to be kept short (see below). It also allowed the detailed content to be structured into short groupings providing a clearer and more accessible structure for students.

The recorded screencasts were then released on a weekly basis to students, to be viewed prior to the two interactive lecture slots each week. The screencasts covered the essential points previously delivered via a 'traditional' lecture, with the aim that a one hour lecture is summarized within a 10-15 minute screencast. The time limit of each screencast was kept intentionally short, recognising the fact that modern learners find it extremely difficult to engage with an online audio resource for longer periods.

Echo360™, a platform that allows for lecture capture and the building in of interactive elements to any presentation, was used to allow students to engage in the interactive lectures using their electronic devices. Students logged into Echo360™ to type answers to any short answer or multiple choice questions, and then answers were displayed on the main lecture theatre screen for further analysis and discussion. All sessions were captured using this same software. Echo360™ records the full session, including slides, which allows for students to listen to, and use the lecture, including student answers and feedback, as a learning resource after it has taken place.

In the interactive lectures, the session started with a short 10 minute summary of what the students had focused on in the pre-recorded screencasts- this acted as a reminder to students of what they had listened to, allowed students to place their prior learning into context, and acknowledged the importance of listening to the relevant screencasts prior to attending the interactive session. The students were then given a number of different activities to undertake, with the focus on 'active', problem-based learning (Bergmann and Sams 2012). These activities involved the cohort splitting themselves up into small groups, where they discussed answers to multiple choice quiz questions or short answer questions; followed by activities focused on working through problem questions or essay-style questions. Following time for consideration of the various activities, the tutor engaged the students in an open dialogue about their answers and comments.

The VLE was carefully developed and designed, with additional time spent prior to the 2016/2017 academic year. In particular, a 'week to view' document was created to act as a scaffold for students as to what tasks to complete each week, as well as a review and development of the number of the screencasts. Traditional reading preparation was also linked specifically to particular interactive lectures and seminars, and learning outcomes for each interactive lecture and seminar were written. So, each seminar and lecture had very specific goals set out for the students, which related to the specific topic being delivered and the specific skills that needed to be built up (focusing first on comprehension, and then on critical analysis and application).

Typically the students took part in three interactive lectures for each topic covered within the module and then took part in one small group seminar (up to 20 students) for each topic. The seminars lasted two hours, the first hour being small group work

where student were split into small group and were assigned particular seminar questions. Students were asked to compare and debate their individual answers to the assigned question (which they had each been asked to prepare in advance), settle on a preferred answer to their assigned seminar question and prepare a group presentation of their preferred answer. In the second hour the small groups then presented their group's preferred answer to the whole of the seminar group and the tutor. The tutor then facilitated a feedback discussion after each group presentation.

The motivation for developing and changing this module was student engagement, and encouraging more active learning by the students. The central aims of developing the aforementioned structure was to ensure that students both engaged consistently with the learning materials throughout the module and further to try and prompt increased time in taught sessions on deeper analysis and evaluation of the subject matter being taught. It has been widely recognised from supporting literature that better engagement from students allows for the students to learn, put their learning into context and 'grow as a learner' rather than simply stay at base level understanding (Fox 1983).

Evidence of effectiveness and impacts

Following the delivery of this module in 2016/17, the author sent out an open call to students undertaking the module. The cohort of students was invited to contribute in one-to-one semi structured interviews, focusing on their experience of the module. In total, following the open call made to the cohort, four students responded and therefore four 30 minute interviews were conducted. These interviews received ethical approval and were both recorded and transcribed.

Although the numbers of responses appears relatively low, the author felt that the 4 one-to-one lengthy interviews amounted to a good uptake following an open and voluntary call, and the interviews conducted produced a rich and deep snapshot of student experience. Learners are active and their views are shaped by their unique nature; and therefore understanding learners' perceptions of their experience through qualitative analysis can allow educators to obtain a deeper understanding of how individual learners engage. (Scotland 2014).

There were some interesting comments and responses highlighted from the one-to-one interviews. This paper aims to pick out some key comments. In analysing the transcription of the interviews, the author employed a student on an 'inside fellowship scheme' offered by the University of Sheffield. The student worked with the author to help analyse the results and draw together some common themes.

From the interviews, the students seemed to find that the screencasts were very helpful in helping them prepare for lectures and seminars – in particular, the students focused on the fact that the screencasts could be accessed anywhere, they could be played numerous times and that they were very useful preparation for the interactive lectures.

One student commented, *"I listened to them before a lecture. If there was still stuff I was unclear, I would listen to them again before the seminar to do the textbook"*

reading". Another student noted, *"it's just the pause button is such a big help sometimes...you could then spend time stopping and listening."*

From the interviews, students also found that the interactive lectures were useful for framing their understanding of the module content, and formed better preparation for the seminars that came afterwards, when compared to more traditional lectures on other modules.

One student mentioned, *"I feel like I am in the lecture because I know what we are going to talk about, what I am going to experience."*

From the qualitative comments in the interviews, students seemed to feel generally engaged, and generally enjoyed the active nature of these sessions – most students had never experienced the use of Echo 360™'s interactive functions before, and felt that it allowed them to interact without potential embarrassment in shouting out in front of all their peers and without feeling forced to contribute.

One student commented, *"it gave you a moment to sort of stop because it's nice when the lecture pauses a bit and you can think about what is being said and then you have to think for yourself, you couldn't just sit and be passive, you had to engage, it made you think more."* Another student explained, *"when a question came up and you had to submit, I could actually do that and that was good because it's a bit of a confidence builder as well."*

Students also seemed to appreciate having a week to view document, so that they were better able to organise their time properly each week and, particularly for this module, appreciate what tasks had to be completed when and in what particular order.

One student commented, *"Week to views I found very helpful, sort of listening to what I needed to do that week and that set it up quite well for me whereas in other modules just read chapter X, Y and Z but it wasn't as broken down."*

There was also evidence of this organisational model being carried on by students as a learning aid in other modules that they were going to study subsequently. One student explained, *"I get that way of working so for my modules this semester I am trying to fix objectives like you used to do for us in Sale of Goods."*

Students interviewed stated that they felt better prepared for seminars, and that other students were also better prepared. This allowed for more fruitful, productive discussions between students.

One student stated, *"more people were sort of keeping up with the sort of regime of the learning, that they had done the work rather than just turning up on the day."* Another student commented, *"I felt a lot more confident in approaching the problem question...felt really like I knew how to tackle one."*

There were, however, some points to improve on noted by the students in the interviews conducted. For example, there were comments that the volume of the preparation provided to students was challenging, particularly where screencasts

were too lengthy (over 15 minutes) or where there was reading set prior to the lectures as well as the seminars.

One student explained, *“you can’t put anything down, you have got to make sure you keep progressing with it.”* Another student commented, *“it seemed there was far more work with this module.”*

In addition, students indicated that they needed clarity and consistency of the provision of resources throughout the semester – on occasion, some screencasts and other content was put up during the module itself, due to recent changes in case law, which students found challenging to deal with in terms of time management and full preparation for the interactive lectures.

One student commented, *“I am the kind of person that if I don’t know it 100% then I am not going to submit an answer.”*

Reflections on the project

The introduction of a flipped learning method involved a large investment of time, particularly in the recording of the online screencasts and the re-design and re-planning of lectures to become interactive sessions. The module also involves continued development and planning, given the amount of resources provided to students on a week-by-week basis. Therefore, the author does comment that such an approach requires careful and consistent planning, sufficient time allocated to initial writing and preparation, and then regular review and careful analysis of student comments and suggestions. Ideally such review should take place during the delivery of the module itself although resource constraints may mean this might not always be possible.

However, that being said, once the initial investment of time in preparation is undertaken, the screencasts and interactive lecture content are available for future cohorts (subject to any updating to content that needs to be done to take into account new developments).

It is acknowledged that a flipped learning method can take time to get used to, for both staff and students alike. This was anticipated when this project was first envisaged, particularly as students had not engaged in any form of flipped learning prior to this module. Therefore, the student cohort required clear support from the start and a clear setting of student expectations. The author contends that if students do not see the benefit of this method of learning from the start, or do not understand how to approach such a method of teaching, then this can lead to disengagement and therefore an associated detrimental impact on student learning. The two tutors teaching on the module tried to set out student expectations from the beginning of their teaching, via an introductory lecture and module handout. It was also felt imperative to continue to stress the message provided throughout the module.

At times, the tutors teaching on the module did perceive some students to be a bit confused about how much time to spend preparing for interactive lectures, and what benefits this hoped to achieve in respect of their learning from attending the

interactive lectures. In future years, this could be more explicitly set out from the start, perhaps referring to factors such as student engagement and deeper learning.

It has been recognized that, with any delivery of teaching content, learning needs to be manageable. For instance, with traditional lectures, it has been shown that students' attention declines after the first 10 minutes and students only remember about 20% of the material during an hour of teaching (McLaughlin J 2014). In the 2015/2016 year of delivery, some online screencasts were acknowledged by both staff and students to be too long and dense, leading to a lack of full engagement in the content. Therefore in the 2016/2017 year of delivery some screencasts were re-recorded to be more succinct, refer to specific learning outcomes, and signposted as an initial summary of the key issues to be expanded on later in the interactive lectures and seminars.

Follow up and future plans

As has been shown already, the module highlighted in this case study has been developed and modified since its inception as a flipped learning model in autumn 2015. However, there is still much to follow up and develop, shaped by the qualitative research that has been conducted to date and student feedback throughout the module delivery.

In particular, substantial work has already been undertaken to add clarity and increased structure to the VLE e.g. further development of the week to view within the VLE to allow students a clearer linear structure of their weekly pre-class, in-class and post-class activities; learning icons and outcomes clearly badged for each week; a specific order of activities suggested to students; and reflective activities signposted to students to help cement their understanding of each topic.

It is recognised by the author that with flipped learning material, it is challenging to monitor whether all students are consistently reviewing online content prior to the attended session. Post module monitoring of when and how often students view the online material is intended to take place in summer 2018. However, this challenge is not peculiar to flipped content alone, in that some students simply do not engage and review material either consistently or constantly. The author's view is that, with a flipped learning model, students realise the detrimental impact of not consistently reviewing online content (when they attend the taught sessions) and therefore are encouraged to better prepare as a result.

Finally, it is hoped in summer 2018 that clearer signposting and justifications for this flipped learning model will be provided by videos from both staff and students who have previously undertaken the module – the hope is that these videos will help increased numbers of future students see the clear benefits of approaching their learning in this format, both in terms of scaffolding to the assessments and in developing skills of organisation and consistent effort for other modules as well as key employability skills for the future.

In terms of future studies, it is hoped that a literature review and associated data study can be carried out to assess more clearly what transferrable skills are

developed by a flipped learning model, and how this can link to issues such as employability and a better developed graduate.

As has been highlighted by this paper, flipped learning requires continued analysis of both student and staff perspectives, and involves consistent effort from staff in the development of learning resources. However, from this investment, the implementation of a flipped learning approach within a module or programme can form an excellent method of refreshing teaching methods, addresses innovation in teaching and positively develops deeper student learning.

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