Luton Sixth Form College Case Study

Project Title: Using a mobile student response system to enhance learner participation in class

Summary: 'If a question is worth asking, it's worth everyone answering'. A very laudable sentiment but practically rather difficult with a class of 20 or so learners. This case study focuses on the introduction of Promethean ActivExpression response systems to promote whole class interactive teaching and to develop the aims of assessment for learning.

Provider Profile:

The organisation

Luton Sixth Form College was the first sixth form college to be established in the country in 1966 and is located in a largely residential area some two miles north of the centre of Luton. The college, which achieved Beacon status in 2004, serves an area, which includes districts of significant deprivation. In 2007, 44.9% of 16 year-olds in Luton achieved five or more GCSEs at A* to C, including mathematics and English which was below the national figure of 46.8%. Some 63% of students are from minority ethnic backgrounds, well above both the national average and the Luton population of 28%. The college provides courses, mainly at level 3, in most sector subject areas. Student numbers are highest in science and mathematics, information and communication technology (ICT), arts, media and publishing and in languages, literature and culture. The college enrolled 2,163 students in 2008/09, nearly all of whom were aged 16 to 18. The majority of students are full-time and follow GCE AS and A-level courses. The mission of the college is: 'to be the outstanding provider of academic and general vocational education for young people in Luton' (Ofsted, 2009).

Author

Marc Hulbert

Head of Professional Development

Luton Sixth Form College

Bradgers Hills Road

Luton

Bedfordshire MK45 2SF

01582 877618

mrh@lutonsfc.ac.uk

Staff and Programme areas involved: This first stage has primarily involved the Professional Development Team: 5 teachers across 4 Departments.

Number of learners involved: Approximately 60.

Action plan aims:

The main aim of this study was to promote the use of voting pods as a means of engaging learners in class and giving instant feedback on their responses. In August 2010 the College moves to a new building and a significant expenditure has been committed to enhancing ILT. As a part of this, it is hoped that each Department will have access to three class sets of voting pods if this initial trial is deemed to have been a success.

The observations of the Professional Development Team were that questioning in class had become routine but that it lacked challenge for even engagement for many of the learners in the class. Lessons would often start with a short Q&A to review previous learning; questions would be differentiated by ability and the plenary was largely based around questioning. What was really happening, though, was that teachers would tend to ask students questions that they were reasonably confident that they would know the answer to: the more able got the more challenging questions and the less able got questions that would build their confidence. Moreover, teachers would usually take a correct answer as an indication that learning had taken place in the class as a whole and they would then move on to something new. Rarely did students ask a genuine question. Students had learnt that to respond with, 'I don't know' generally got them 'off the hook' and the teacher would move on to someone else to answer. Once a student had been asked a question, it was unlikely that they would be asked another one any time soon.

The Annual Development Plan for a number of Departments makes reference to a need to improve whole class participation and a need to enhance the provision of Assessment for Learning. The College Assessment Policy states that work should be returned to students, with helpful feedback, within 10 working days. Student Perception of Course Questionnaires indicate that this isn't always adhered to and that they don't always feel as though they are getting regular personal feedback. For students to understand their learning, they need to have better feedback within the classroom environment.

The specific aims of this project were therefore:

- To create an environment where all students feel comfortable to answer questions in class.
- To significantly improve the degree to which students would contribute in a lesson
- To provide students with instant meaningful feedback on their answers
- To create a sense of enjoyment about contributing to classroom discussion
- To reduce marking of routine tests and to improve teacher records of such tests

Implementation

The first part of this project was to decide on a system that seemed to offer everything that we wanted, although, at this stage, we didn't know what we wanted them to do because we had no idea what was possible. We were also aware that we could put together questions and tests using Blackboard that would be electronically 'marked' in an exportable form, so how would voting pods be different?

A group of four people (Head of Professional Development, VP Curriculum & Quality, IT Systems Manager and the Director of Resources) looked at three systems that increased in functionality and in complexity. The first was certainly compact and simple to use but that didn't seem to offer very much beyond multiple choice questions. The second system offered much more and was based around PowerPoint so there would be little to learn to get it off the ground. The student tracking system looked impressive but was based on individual pods which meant that each student would have to use the same pod each lesson. This system also enabled students to answer questions using text rather than just hitting A, B, C or D. One downside was that the method of text input was time consuming and cumbersome. The third system was Promethean ActivExpression. The pods looked rather like a version of 'my first mobile phone'. They were chunky and they were orange. To put it another way, they were robust and unlikely to be stolen. They are based around a standard mobile phone text keypad and offer a variety of questioning types. The students register their pod at the beginning of each session using a three digit code. No longer is there the problem of making sure that each student gets the same pod each lesson to be able to use the data.

We bought two class sets of pods and the Professional Development Team then completed an afternoon's training with LEB to learn how to generate spontaneous questions and how to create pre-prepared questions in flipcharts. One problem here was that we had installed an earlier version of the software - the pods had been upgraded to work with Promethean's IWB software, ActivInspire.

A number of College Development Groups were then created as part of the commitment towards the 30 hours' CPD requirements for the sector. This gave the Learning Development Leaders an opportunity to try out the pods for themselves and to begin to encourage others to use them. The main users were in Maths, Business and English and we sought regular feedback from the users.

It was at this point (January 2010) that we upgraded the software and the firmware of the hubs and the pods to run with ActivInspire. The Professional Development Team completed additional training on the new software. The additional functionality of ActivInspire was impressive enabling a much wider variety of questioning options and better design features. We then bought additional sets of pods so that each of the six teaching departments would have access to one set.

The Professional Development Team then began to roll out specific training in voting pods as part of the College's CPD programme. Sessions were offered at two levels in the spring term with two repeats of these sessions. Session 1 covered registering the pods and asking spontaneous questions. Session 2 covered pre-prepared questions, exporting to Excel and using the pods with PowerPoint.

At this stage we then gathered feedback from a pilot group, a second year A2 English Language class, to assess the early impact of the pods. There were 20 students in the class with 2 absent on the day that they completed a questionnaire on their experience of using the pods (see appendix 1)

Successes and outcomes

Initial success

Each time that we used the voting pods in a class we noticed a certain 'buzz' of excitement in the room. Of course, anything new creates an initial sense of curiosity but after a three month trial there is still a lot of enjoyment about using the pods. When polled, every student in the 'test class' maintained that they had enjoyed using the pods. Some have enjoyed the novelty claiming that the pods, 'Offer something a bit different'. Others have commented on the way that using the pods affect their learning: 'They have made the lessons more exciting and have encouraged us to engage more in the activities' or '[The lessons were] much more interactive with everyone involved.'

Any technology in the classroom must be simple to use and the class certainly found these easy to work with. By the end of the trial, the teacher would simply put the bag that the pods are kept in on the front desk and the students knew to take one as they came into the room. The registration code would already be displayed on the front screen and students would be ready to go as soon as the lesson started. Any late arrivals can easily be registered as 'top ups'. Again, all students agreed that the pods had been easy to use, many pointing out that they were similar to a mobile phone. Two students in the class pointed out that they got confused initially, one citing the registration process as a difficulty, but that they soon got used to them as they used them in lessons. We were concerned that the students would find them a distraction. Having used them in class a few times we felt reassured as there isn't very much that could cause a distraction. As the teacher, you decide when they are active and when the pods aren't expecting a response they sit there silently looking at you before going to sleep. When polled 89% (n16) of the class disagreed with the statement, 'Voting pods can sometimes be a distraction in lessons' and of those 28% (n5) disagreed strongly. Some students felt that they were actually more focused when using the pods as they had to be ready to answer questions. One student put it succinctly, 'They're not [a distraction] at all, rather more a help than a distraction.'

Generating ideas and discussion

During the trial we used the pods for a number of purposes. One of these was to improve the generation of ideas by using the text function. In a lesson on slang that had been taught many times before, the teacher had always found that some class members were reluctant to share ideas - it is perhaps slightly embarrassing to use your own slang in a classroom environment. It also took a long time to get responses from everyone. Using the voting pods, everyone had contributed their own ideas of slang terms for good / bad within a few seconds and more time was then available to discuss the issues and patterns. The words that had been generated could be sent to a blank 'flip chart' and then organised easily. The software enables links to be made with simple lines so the teacher could create a basic mind map. Furthermore, the teacher was able to export the flip chart as a Pdf file ready to go onto the VLE.

Confidence in class

It was this capacity to overcome reluctance to contribute that was perhaps the main benefit of the pods. When asked how confident students felt to respond to questions in a normal lesson, 45% (n8) claimed that they felt unconfident or very unconfident. Conversely, only 28% (n5) maintained that they would feel confident to answer questions usually (and no one felt very confident). Reasons given for this lack of confidence were that questioning 'puts you on the spot' and that it is 'embarrassing if you get it wrong.' Another student maintained that if she wasn't certain that she knew the right answer to a question then she wouldn't risk 'having a go' in front of others for fear of 'looking stupid.'

After having used the voting pods, students not only answered more questions in class but also clearly felt much more confident about answering those questions. When asked how confident they felt about answering questions using the voting pods 89% (n16) said that they felt confident or very confident. In fact, 39% (n7) of the class now maintained that they were 'very' confident. The majority of students cited the anonymity and the collectivity as a reason for feeling more confident. However, this was a key learning point for us. We had sometimes posed a question and then viewed the results by person. This way, we everyone could see who had said what and it enabled us to ask follow up questions. Although this was useful at the time, we hadn't previously told the students that we would do this. One student in the test class made the point that she was, 'conscious that others could see her response.' Another said that she felt more confident to answer questions but she was 'worried that [the teacher] would show everyone's answer on the screen.' We realise now that it is important to tell the students beforehand how you will view their results. A way around this is to freeze the projector on the initial overview screen whilst the teacher can then view individual responses.

Feedback

Ideally, any kind of assessment in class should help students to understand where they are in their learning and what they have to do to reach the next stage. This has clearly been a further benefit of using voting pods, at least for some students. 84% (n15) of the class agreed that they learn better with instant feedback and 61% (n11) agreed that they can check their learning better using voting pods compared to verbal questioning in class. However, students were asked the extent to which they agreed or disagreed with the statement, 'In lessons with voting pods, I get more feedback on my contributions than I would in lessons with verbal questioning from the teacher.' Interestingly, 17% (n3) agreed with this statement and 39% (n7)disagreed. 44%, (n8), neither agreed nor disagreed. Comments here were actually more about the quality of the feedback. The feedback from voting pods gives an instant view of progress but learners value the specific details of the one-to-one feedback given by the teacher. We found this rather reassuring. One student did point out that it is the feedback of the pods and teacher together that is particularly effective, maintaining that the pods give a snap shot of the class that then leads to more specific discussion afterwards.

Challenges

- Starting the project with the earlier version of ActivExpression before moving to ActivInspire
- Lack of consistency across all College classrooms. Some machines have ActivInspire loaded whilst others don't.
- Having hubs and pods that all needed an individual firmware upgrade to run the Race Game and the self paced questioning sets.
- The first lesson with each class certainly takes longer as students have to be taught how to register and use the pods.
- Having a limited number of sets limited how much they could be used.
- Students must register using the same name each session if results are to be exported to Excel for the purpose of analysis. It might be better to register using Student ID numbers.
- One Department (Business) felt that they would not make consistent use of the pods because the class had to progress together. They wanted students to progress at their speed. Although we didn't realise this at the time, this is actually possible with self paced questioning sets.
- All student names appear on the screen and turn yellow when students respond. It is therefore very obvious if the class is continually waiting for a response from a particular student. The vote can be stopped at any time or a time limit can be imposed to limit the whole class impact of this but it does mean that a student could almost 'opt out'.

Lessons learned

- Try out different versions of equipment that you are thinking of buying. Invite companies in to demonstrate but you must have 'hands on' experience.
- Be clear about what you want the equipment to do. What will the outcome for learners be? Don't be tempted by gizmos that you won't use.
- Have a sense of how things will look in the future if your project has been a success.
- Don't make assumptions about hardware. Check that your equipment has the latest firmware installed. Do you have to upgrade yourself?
- Don't make assumptions about software. Is a later version available?
- Don't try to run before you can walk. Start with a small manageable target and build from there.
- Don't be tempted to launch too early. We made this mistake by launching with the ActicExpression software and then having to retrain the Professional Development Team to use ActivInspire.
- Don't try to cover too much in staff training sessions. It is better to have a programme with a series of sessions with exit points rather than trying to fit too much into one big session.
- Consider whether all training has to be face to face. Could you make use of your VLE to deliver podcasts?

Next steps

All in all we are pleased with the way in which students have responded to the pods. All those involved certainly feel much more confident in using them although there is much more that we would like to do with them. One thing that we haven't really explored is to use what are called 'self paced questioning sets'. Here, questions are sent directly to the students' pods rather than appearing on the screen and they work through the questions at their own speed. Moreover, when you write the questions, you can set them at different levels and also set how many questions they need to get right before they move onto the next level. This would be a very effective way to differentiate learning .

We are confident enough to buy another 5 sets of pods (which will actually create 6 class sets of 28) so that each teaching Department will have two sets each from September 2010.

The specific staff training sessions need to be more specific covering all aspects of the pods. This will involve a programme of four sessions with various exit points running throughout the year.

The Professional Development Team will put together a series of audio / visual podcasts to be published in the staff central internet (SharePoint) to supplement the training. Staff will be able to access these remotely as well as at the College. The capital grant funding has been used to buy the equipment for this.

Key words and tags

Student response system(s); voting pod(s); Promethean; whole class interactive teaching; assessment for learning; interactive games.