Using Mobile Technologies and Video Sharing to Engage Students

Stephen McClean
School of Biomedical Sciences
University of Ulster
s.mcclean@ulster.ac.uk

twitter.com/PlanetChemistry
BMS105 Introductory Chemistry

- Chemistry ‘service teaching’ module
- Provides foundational chemistry for further study in biochemistry, clinical biochemistry, molecular biology etc.
- Taken by students in Biomedical Sciences, Human Nutrition, Food and Nutrition, Dietetics & Biology
- 140 in 2007/08; 138 in 2008/09; 177 in 2009/10; 117 in 2010/11
Text Messaging for Communication

“Please switch ON your mobile phone!”

Send a message / question to

07950080268 starting with hucbms
Communication

- Two-way communication; staff – student – staff
- Students may text questions during lectures
- Email to text and text to email function
- Bulk mailing to address book of contacts
- Mail merge allows personalised information to be included in bulk texts
- Mail filtering rules may also be used
Enhancing Feedback

- Peer assessment of written class tests (n=200)
- Student A anonymously marks Student B’s test paper and assigns a mark
- Student A sends a text message to the dedicated text number starting with Student B’s student number followed by the mark eg “B0012345 57%”
- The mark is then delivered via the online address book to Student B’s phone.
Student A marks Student B’s paper and sends result via text message to the TtxtTools number.

Mail filtering rules based on Student B’s ID number deliver the text to Student B’s phone.
Voting / Quizzes

- Student text responses to in-class quizzes
- Pie-chart of responses may be generated
- No need for a separate voting handset
- Is not restricted to students just in the lecture theatre
Reflections

- Powerful and rapid communication tool
- Utility beyond a uni-directional channel
Text Messaging for Communication

“Please switch ON your mobile phone!”

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More about the project here: http://bit.ly/g5aZUq
I hope he read the protocol before lab because I didn’t!

I hope she read the protocol before lab because I didn’t!
Student Engagement in the Lab

- Social interaction was recently highlighted by students as one of the better features of university laboratory classes

- Students claim they sometimes do not see the relevance of practical sessions

- Practicals are time & resource-intensive teaching sessions

- How can we add value to the lab experience? Can we “extend the lab experience?”

Materials & Methods

- 3 x Canon FS11 Video Cameras
- 1 x Toshiba Laptop
- 1 x Webserver
- Vidiscript.com software (to make You Tube clone site)
- Video conversion software (www.any-video-converter.com)
- Domain name (YouTestTube.com)
- 160+ eager year-one students
Materials & Methods (continued)

- Students (in groups of 3 or 4) make a short (10 minutes duration) video about their practical

- A “reflective prompt” sheet is provided to each group as to what should be included in the video

- Final video is published “uncut” onto the YouTestTube.com website
Materials & Methods (continued)

- Students “join” the Chemistry Practicals Group on YouTestTube.com

- Students may then view, rate & comment on their colleagues’ videos

- Students may ‘make friends’ as part of the social networking aspect of the site.

- A prize for the most ‘Popular’ and ‘Highly Rated’ videos. A few coursework marks are also awarded for engagement
Reflective Prompts

- What is this practical all about?
- What skills have I developed?
- How does this practical tie-in with the lectures?
- How will this be important for other parts of my course?
Reflective Prompts

- What parts of the practical were difficult?
- What was most/least enjoyable about the practical?
- If someone else was about to conduct this experiment; what advice (about the practical) would I give them?
But Was it Any Good…?

- Feedback received from students via anonymous questionnaire
- Via staff-student consultative meetings
- Via evaluative comments when completing their assignment on “The YouTestTube.com Experience”
- Feedback from the Ed Wood Award (Bioscience Teacher of the Year) process in 2009/10
**Evaluation Statements 2008/09 Academic Year**

*Total respondents n = 105*

<table>
<thead>
<tr>
<th>Evaluation Statements</th>
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<tbody>
<tr>
<td>Were You Initially Apprehensive About Making Videos?</td>
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<tr>
<td>Was the Camera Easy to Use?</td>
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<tr>
<td>Did You Enjoy Making Video?</td>
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<tr>
<td>Did the Process Make You Think More About the Practical?</td>
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<tr>
<td>Did You Enjoy Viewing Colleagues’ Videos?</td>
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<tr>
<td>Did You Find the YouTestTube Site Easy to Use?</td>
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<tr>
<td>Did the Exercise Help You to Make Friends?</td>
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Student Responses to Technical Aspects of the YouTestTube.com Project

Number of responses

- Initially apprehensive about making videos
- Camera easy to use
- Enjoyed making the video
- YouTestTube easy to use

Response

Strongly Agree
Agree
Neither Agree / Disagree
Disagree
Strongly Disagree
Student Responses to Reflective Aspects of the YouTestTube.com Project

- Made me think more about the practical
- Enjoyed viewing colleagues’ videos
- Helped me to make friends

Number of Responses

<table>
<thead>
<tr>
<th>Response</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree / Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Made me think more about the practical</td>
<td>15</td>
<td>50</td>
<td>20</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Enjoyed viewing colleagues’ videos</td>
<td>20</td>
<td>50</td>
<td>20</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Helped me to make friends</td>
<td>10</td>
<td>30</td>
<td>20</td>
<td>10</td>
<td>5</td>
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</table>
“Good way to make friends within class.”

“www.youtesttube.com is a great way to interact with the class as well as learn from the practicals completed throughout the semester. It is a great idea!”

“Found youtesttube.com to be quite useless. Although it was good craic making the videos I still don’t see the need for it at all!!!” (‘craic’ = ‘fun’)
YTT helped me learn about chemistry

YTT activities were unnecessary

YTT helped increase my depth of understanding

YTT project helped increase my motivation to learn

Learning about chemistry this way was boring

Student Evaluation of Reflective Video Impact on Learning

Percentage of Respondents

Evaluation Statement

YTT helped me learn about chemistry
YTT activities were unnecessary
YTT helped increase my depth of understanding
YTT project helped increase my motivation to learn
Learning about chemistry this way was boring

Strongly Disagree
Disagree
Neutral
Agree
Strongly Agree
Comments from 2009/10 Cohort

“It was very helpful when doing the practicals. I watched the videos first and then when I went to the lab it was much easier.”

“...was a great way of finding out information about the practicals and after viewing some of the videos I was able to carry out my practical more (confidently)”
Feedback in the 2009/10 Year

- Some students (panel group and surveyed) would have liked to view the previous year’s videos.

- Student panel members were hesitant to provide critical comments in a public forum but said if they privately viewed a video they would.
Feedback in the 2009/10 Year

- Students wanted to protect the ‘fun’ aspect of the exercise since an assessed video would become more of an exercise about ‘getting it right’.

- Only a few of the surveyed students listed reflective skills as an identified skill learnt.

- First year students did therefore extend the practical experience.
UK Centre for Bioscience Case Study

Concluded:

“The YouTestTube reflective videos successfully served many purposes: social function, engaged learning, and use of reflective practice to both inform current understanding and future work.”

(Meskin, S; 2010)
Read More About YouTestTube

JISC – Emerging Practice in a Digital Age

www.jisc.ac.uk/digiemerge
Acknowledgements

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Student Transition And Retention
(The STAR Project)
www.ulster.ac.uk/star