
Using Reflective Video Sharing in Year One Chemistry Laboratory Sessions

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Why Did I Apply?

- Putting practice in context
- External evaluation and reflection
- Dissemination of practice
- “Head above the parapet”



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, Pharmacology, Human Nutrition, Food and Nutrition, Dietetics & Biology
- 176 students in 2005/06; 123 in 2006/07; 140 in 2007/08; 138 in 2008/09; 177 in 2009/10

Student Engagement in the Lab

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?”*

Collis et al 2007 Report: The Student View of 1st Year Laboratory Work in Biosciences. Centre for Bioscience.
Collis et al 2008 Bioscience Education electronic Journal, volume 11.



Broadcast Yourself



TestTube.com

an online science video resource

Materials & Methods

- 3 x Canon FS11 Video Cameras
- 1 x Toshiba Laptop
- 1 x Webserver [i](#)
- 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
- They may also ‘make friends’ as part of the social networking aspect of the site.
- A prize for the most ‘Popular’ and ‘Highly Rated’ videos.

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?



Top Rated - Highest Rated Media



Equilibrium Video 6 BiomedPharmBio Cohort



Made by Chris, Kathryn, Nicole and Rebekah!

tags: equilibrium

From smcclean on: 10.28.08

views: 78



Osmosis Video 4 BiomedPharmBio Cohort



Made by Victoria, Jennifer, David and Rory!

tags: osmosis

From smcclean on: 10.14.08

views: 610



Reaction Rates Video 4 BiomedPharmBio Cohort

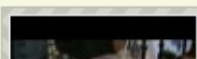


Made by Naomi, Aaron, Seamus and Natasha

tags: reaction rates

From smcclean on: 10.21.08

views: 101



Calorimetry BiomedPharmBio Video 3



Menu

Logged in as smcclean

- **Account Management**
- Inbox : 1 (0 new)
- Outbox : 3 (0 unread)
- My Friends : 13
- Received Requests : 10
- Sent Requests : 0
- Blocked Members : 0
- Subscriptions : 0
- Favorites : 0
- My Media : 40
- My Groups : 2
- My Profile
- History
- Profile Views

Admin Menu

- New Uploads (1 New)
- Manage Media
- Manage Users
- Manage Video Ads
- Manage Site Ads
- Manage Categories
- Manage Email Text
- Manage Menus
- Bad Words Filter
- Site Settings
- Buy & Manage Extras

But Was it Any Good...?

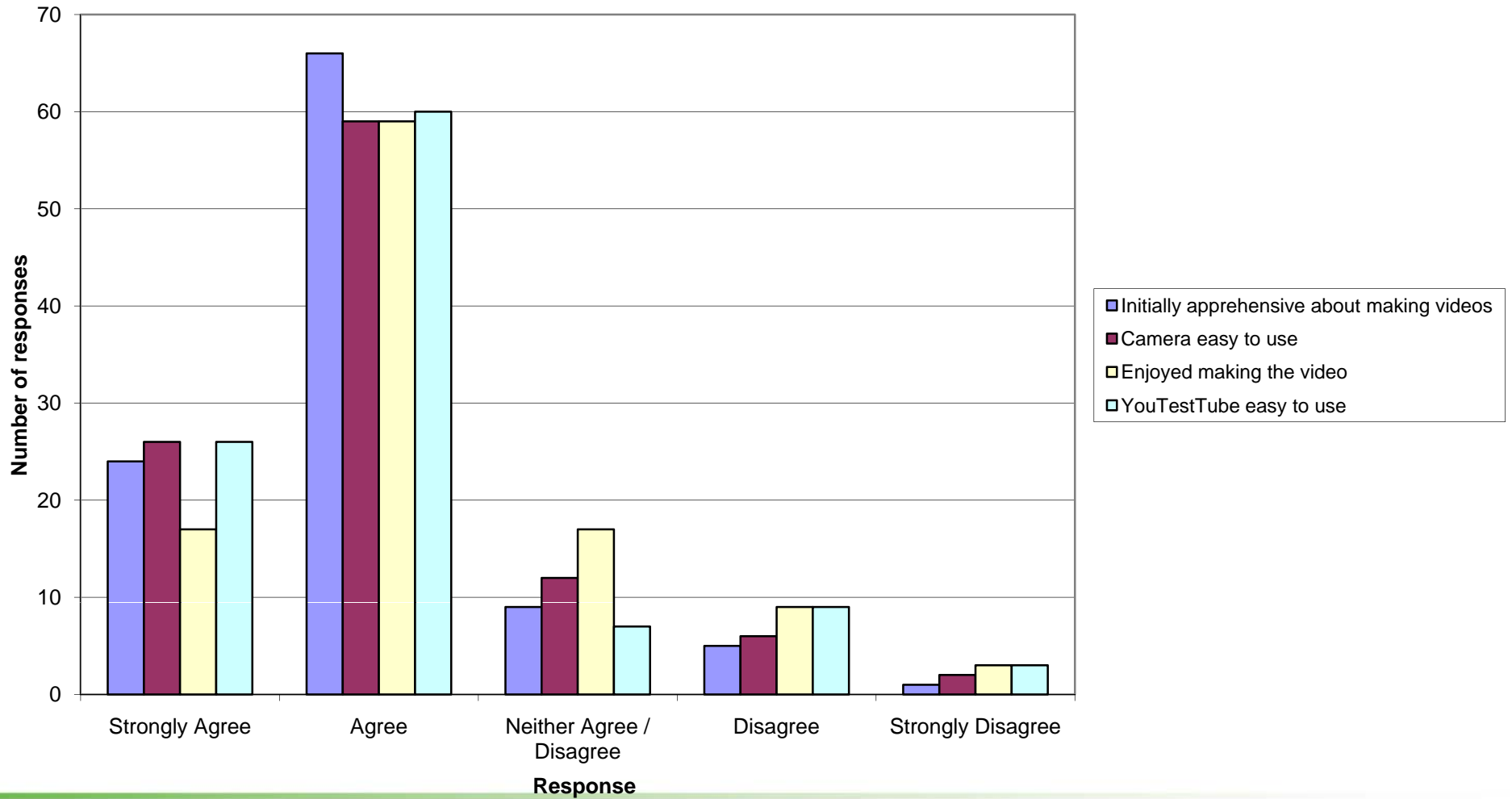
- Feedback received from students via anonymous questionnaire
- Via staff-student consultative meetings
- Via evaluative comments when completing their assignment on “The YouTestTube.com Experience”
- Feedback from the Ed Wood Award process in 2009/10

Evaluation Statements 2008/09 Academic Year

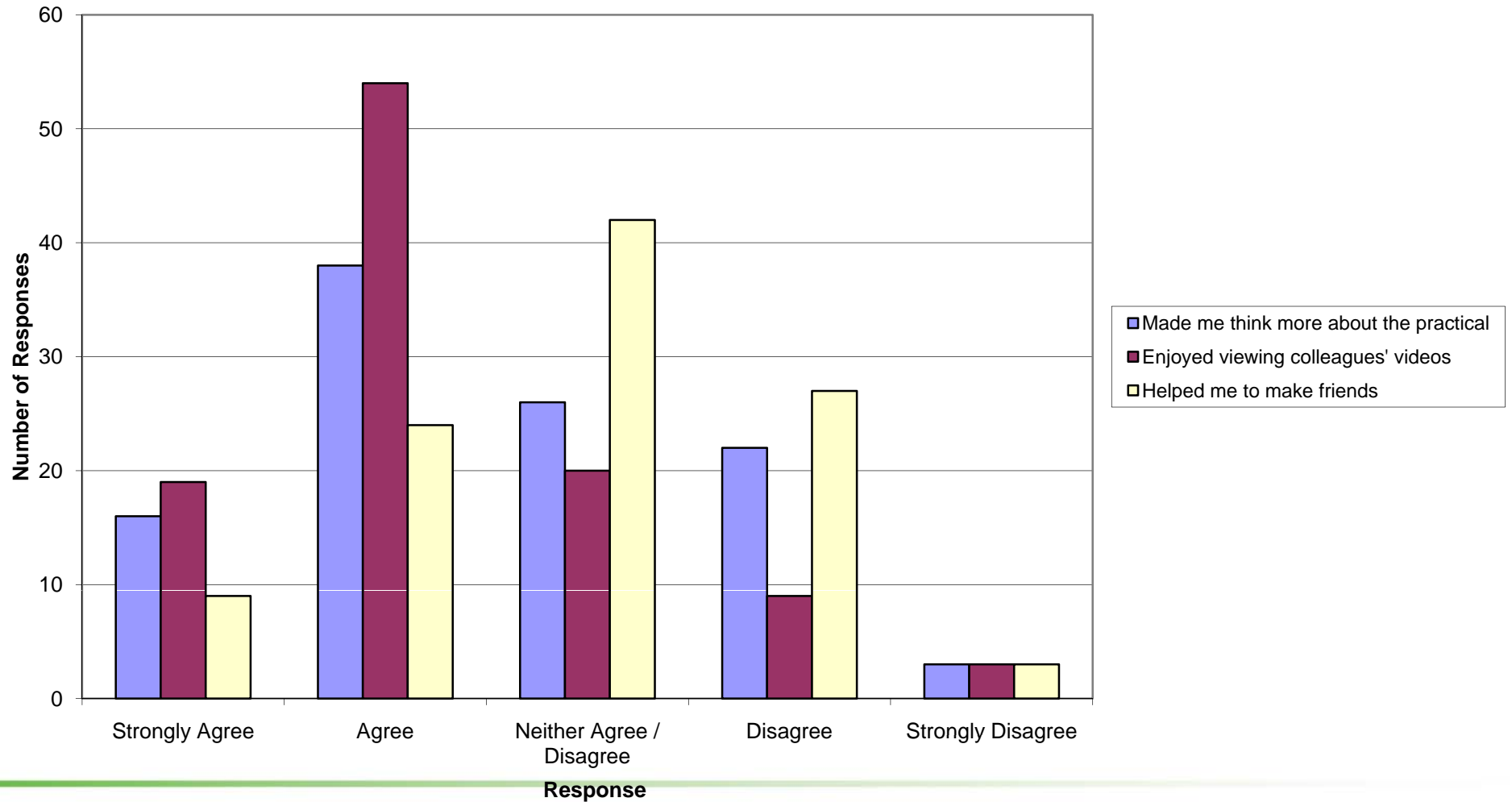
Total respondents n = 105

<i>Evaluation Statements</i>
Were You Initially Apprehensive About Making Videos?
Was the Camera Easy to Use?
Did You Enjoy Making Video?
Did the Process Make You Think More About the Practical?
Did You Enjoy Viewing Colleagues' Videos?
Did You Find the YouTestTube Site Easy to Use?
Did the Exercise Help You to Make Friends?

Student Responses to Technical Aspects of the YouTestTube.com Project



Student Responses to Reflective Aspects of the YouTestTube.com Project



Comments from 2008/09 Cohort

“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 dont see the need for it at all!!!” (‘craic’ = ‘fun’)

Laboratory Management

Practical 1: Titrations

- Week 1
- Biomedical Science, Pharmacology, Dietetics and Human Nutrition students
- Week 2
- Biology and Food & Nutrition students

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 from the Ed Wood Award Process

- Some students (panel group and surveyed) would have liked to view the previous year's videos.
- Surveyed students listed the top four skills learnt as: lab skills, knowledge of chemistry to include improved understanding of its relevance and importance, study skills, and teamwork skills.
- Student panel members were hesitant to provide critical comments in a public forum but said if they privately viewed a video they would.

Feedback from the Ed Wood Award Process

- 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.*

Feedback from the Ed Wood Award Process

“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.”

Other Uses of the YouTestTube site

- Year 1 Bioanalytical Chemistry module, embedding and sharing videos on the topic of proteomics as part of a context based learning exercise
- MSc Students embedded, shared and discussed videos on aspects of mass spectrometry / proteomics with colleagues on the module

Staff Reflections / The Way Ahead

- Overall a good experience, relatively easy to manage
- Process of getting video from camera slow and cumbersome
- Students could be given greater ownership of videos (editing / uploading etc.)
- The process is now fully embedded in the BMS105 module

Thoughts Towards Developing Your Own Video Resource



Develop your own channel on You Tube and create a closed group for your students.

Advantages:

Relatively straightforward to set up
No knowledge of coding or web design required
No concerns about bandwidth usage or webspace.

Disadvantages:

Most videos should be around 10 minutes in length.
Authentication of students may be an issue.
Student perceptions of using a branded social networking site for educational use.

Thoughts Towards Developing Your Own Video Resource



Build your own site and host it yourself using free software such as Vidiscript or PHPMotion



Advantages:

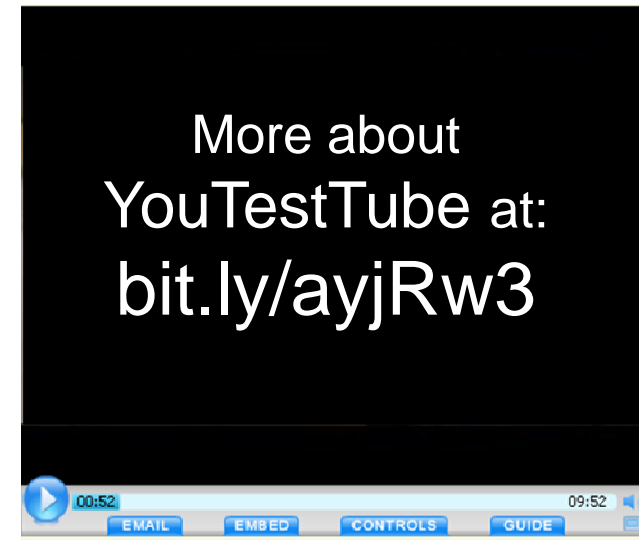
Create your own branding to a tailored video site. You have control over all content, membership of groups etc. Can be completely closed to the outside world. Set up your own blogs, discussion groups and host teaching materials. No time restriction!

Disadvantages:

Requires some technical knowledge on how to set up the software and hosting of the site.

Acknowledgements

- Sheryl Meskin
- Paul Hagan
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(The STAR Project)
www.ulster.ac.uk/star



JISC Tech**Dis**