

**Science, Technology & Society, University of Wollongong**  
**STS250/251 “From molecular genetics to biotechnology”**  
**The 2005 class’s recommendations for future classes**

On the last day of class (25 May 2005), students filled out a questionnaire with their recommendations for future STS250/251 classes. The questions are given here (in Times font), followed by my summary of responses and my commentary (in Ariel font, like this). 18 of 25 students enrolled completed the questionnaire. I have edited some comments to fix spelling and grammar and make the sense clear. Lists of comments are arranged in alphabetical order by the first letter.

### **Designing the subject**

In week 1, students helped design the subject using a guided process of discussing personal interests, desired topics to study, desired skills to learn, and desired assessment. What worked well about this? What changes would you recommend in this process for future classes?

Only some students commented on this. Here are their responses.

- Choosing weeks for essay due dates worked well because we could negotiate around other subject commitments.
  - I think this was a good idea. People's insight was valued.
  - It allowed for compromise.
  - It worked pretty well in terms of deciding what topics to cover because everyone got to put forward their interests.
- Most of what was done was chosen by us. We did not have to do much that we were really not into.
  - The method allowed us to study topics we were actually interested in as well as meeting people, which was nice in a small discussion-based class. We also were able to determine the workload which was nice. It was a little awkward and confusing as to what exactly to do at times.
- This process was good. It gave us all a bit of input.

In addition, two students expressed a preference for a more lecture-based approach.

## Topics

We covered:

- origin of AIDS 4
- designer babies 8
- stem cell research 14
- organ harvesting 5
- GM crops/food 11
- biowarfare: military and genetics 3
- media and genetics 3
- intellectual property and genetics 6
- cloning 8
- future of genetics 3

Which of these do you recommend most highly for future classes?

The number of students who recommended each topic is indicated above. At least three students supported each topic. No topic was recommended highly by all 18 respondents.

## Theories

Several theories were suggested for use in the oral activity and the essays:

- political economy 7
- social construction of scientific knowledge 9
- actor-network theory
- participatory democracy 3
- semiotics
- feminism 3
- consumerism 2
- Islam 6
- Christianity 8

Which of these theories is top priority for future classes?

The number of students who recommended each theory is indicated above.

What other theories would you recommend for future classes?

The following were listed: chaos theory (2 mentions); neoclassical economics; Marxism; humanism; holism; Buddhism (2 mentions); Hinduism; Judaism; pragmatics

Would you like more or less guidance on the theories?

Nearly everyone wanted more guidance on the theories. A number of people commented that science students found the theories difficult and hence needed help. In future I will try to suggest a reading that explains the basics of each theory, and run more sessions on understanding and applying theories.

Additional comments:

- Maybe narrow it down to a few theories. That way people can learn about them in more depth and have a deeper understanding of them.
- The different theories get you to think outside the square which for science students is a good thing because we tend to get bogged down in facts.

### **Class participation**

On weeks 2 through 12, you were expected to find, read and bring along an article about the week's topic and tell the class about it. What worked well about this? What changes would you recommend in this process for future classes?

Most people seemed to like this. Everyone commented, as follows:

- Everyone participated. Even though it was just a report back, it got ideas flowing and made you think about different perspectives.
- I found a lot of interesting articles and information around the topic — great.
- I thought the process worked really well. On a personal level, it increased my skill in researching on the net and it was interesting to listen to what other people reported.
- I thought this was good in initiating the reading of relevant articles, but on some weeks more than one person had the same article, so possibly everyone should bring two articles to get variety.
- If you were interested you could get marks simply by your effort. Hearing other people's opinions and knowledge was also interesting.
- It meant that everyone had something to contribute.
- It was good that so many diverse opinions were able to be covered.
- It was good to get everyone's different perspective. It gives you an idea of the information that's out there.
- It was good to hear everyone's opinion but there was no real class discussion which probably would've been more significant. Also, people could get the articles at the last minute. Maybe they should do a summary of the article next time so there are no last-minute jobs.
- It was good to understand the topic and have an idea what is going on in the class.

- It was not well checked. I would say hand your piece in with some comments and get them back with a mark (out of 2). Then the total of these marks is used to determine the class participation mark.

- It worked well because it gave us access to lots of material that we wouldn't gather on our own.

- It worked well in giving students points for showing up, having grabbed something off Google 10 minutes beforehand. All that was done on the topics was a quick summary. More class time is needed to discuss topics.

- It worked well that you knew you had to have something every week. It provided a broad understanding about biotechnology. I think this should be part of an assessable item.

- The articles let us hear about a variety of topics within one area that we might not otherwise hear about. It would have been nice to maybe discuss some controversial thing, interesting and unique ones, or conflicting views presented in the articles, to make more use of them.

- This was good. It encouraged preparation, presented a wide range of insights and covered broad areas of the topic.

- This worked really well. It gave everyone a chance to read up and form opinions on the topic.

- We covered a large area of research in a short time. Everyone was able to contribute.

### **Oral activity**

Students either made a formal presentation to the class or designed an activity to help others understand the topic in its social context, or used a combination of presentation and activity. What worked well about this? What changes would you recommend in this process for future classes? As a member of the audience, do you prefer presentations or activities?

The main recommendation was to provide better guidelines for what was expected from presentations (6 comments).

From the audience perspective:

- 1 preferred presentations;
- 5 preferred activities;
- 7 preferred a combination of presentation and activity.

Three said that activities were effective, but weren't sure how much they learned from them.

Comments:

- A large amount of information on individual topics was presented.
- I think it gave a broad idea of a topic.
- It helped me a lot to understand a few topics pretty well and all the issues around each one.
- It was annoying that more than one were presenting on the same topic.
- It was flexible and you could therefore be 'individual.'
- It was great to learn about different things from various groups.
- The audience should have had a standardised comment sheet to hand in which Brian could consider in his evaluation (or not).
- The choice between presentation/activity/combination allowed people to play to their strengths.
- The flexibility of choosing which way you wanted to present was good.

## Essays

What did you like about the essays? Is there any aspect of the essays that you would suggest changing? (style of opinion piece and information leaflet; freedom of choosing topic; word length; assessment criteria; due date; use of theories; preparation in class; etc.)

- Allow time for preparation of essays in class.
- Change nothing! I found it really hard to do both of them because it felt like I was doing a project for high school, which was really hard!
- I liked that the essay had to fit a particular structure (e.g., leaflet) since it made it more interesting.
- I liked the creativity; they were not just normal essay questions. Choosing the topic is good because you can follow your personal interests. More time for preparation in class would be beneficial, especially for the first essay.
- I liked the flexibility.
- I liked the use of different text types.
- I personally liked the essays and their relation to the topics.
- I personally prefer to have a focused question.
- Some time to prepare in class may help. I really liked being able to choose the topic and theory. There was a lot of freedom in these assessments which was great.
- The assessment criteria were very vague. A week to work on one of the essays in class would be good.
- The essays were very open format, but they weren't really "essays." They were interesting but call them writing tasks instead, or create questions to answer for *real* essays. Also, it may be of use to hold a tutorial on formatting assignments.

- The formats of the essays were great, a nice change from writing scientific reports. This is what this class is all about: to think outside the square of the scientific world and look at the big picture. By using this format, it forced me to think differently. That was quite challenging.

- The opinion pieces were fun to write and made applying the theories easy.

### **Assessment**

The following were the components of assessment:

- Class participation
- Oral activity
- Essay 1
- Essay 2
- Analysis (STS250 only)

Would you suggest any change in components or weightings for future classes?

Overall, there were few suggestions for major change. Six people did not suggest any change. Here are the comments from the other 12:

- Class participation items should be handed in and made part of a marking system.
- Class participation: there should be defined criteria.
- Essays should be equally weighted.
- Have essays weighted less, in-class activities more.
- Have less weighting on the oral activities because people aren't comfortable with public speaking.
- I liked the assessment structure and types.
- I think a lot more time goes into preparing group activities so that should be weighted more heavily. And I really don't like essays ... but I can't suggest anything else. Sorry!
- Maybe there should be a little more weighting for class participation just because it was quite a bit of work to always find articles.
- Maybe there should be an extra writing assignment, so the other two are weighted less.
- Perhaps put more weight on the group activity.
- Perhaps the analysis should be due earlier since it's in the prime exam period.
- The oral activity should be worth the same as an essay: some people prefer one over the other.

Elsewhere on the questionnaire, there were two complaints about marking of the oral activity.

## **Activities in classes**

Which activities do you recommend most highly for future years?

- Exercises to learn other students' names; weekly introductions 15
- Exercises working in small groups about the week's topic (run by Brian in early weeks) 8
- Weekly reports on items about the topic (by students) 14
- Oral activities (by students) 10
- Snacks 12
- Excursion 6
- Guest speakers 9
- Others — 1 (creative ones: role play, debate)

The number of students who recommended each activity is indicated above.

There were two comments about the small group exercises:

- Giving us a number to join into groups worked well. It forced you to get to know everyone in the class which was great.
- The fact that you split us up in a numbering fashion felt very childlike. Some people shy away from group work with largely unknown personalities. Had you allowed us to choose our own groups, I do feel greater participation would have come about.

## **Brian's summary**

- The method used in week 1 for designing the subject worked quite well.
- Many of the topics covered appealed to most students.
- I need to give much more guidance on the theories.
- The weekly article reports worked very well.
- The oral activities were appreciated, with most students preferring at least some activity rather than just presentation.
- The essays were pretty well appreciated. Several said they liked the format and flexibility of choosing a topic.
- There was no consistent preference to change the assessment mix.
- The activities in class most highly rated were introductions, weekly reports, snacks and oral activities.

My thanks to everyone for your contributions.

Brian Martin, STS250/251 subject coordinator, 2005