

## **(1) Rotation-research tutorials**

### **Overall feedback on the rotation tutorials?**

The groups liked staying together as they rotated around four tutorials, something that does not happen for the other second year students (they are mixed up). The four tutorials were all well received, with students enjoying preparing for them with the apps, as well as using the apps and iPads in the tutorial. Particularly positive was the use of the Nearpod app in the ER tutorial, since it was very well planned and thought-through for the material.

The iPads were more useful for some students than others during the tutorial, but for all it was positive – the students who used it less in tutorials told us that it helped them to be more productive and streamlined. They did not replace whiteboards/laptops/paper for every student, but there was a significant shift away from these other materials.

### **Did the format enable us to deliver you a higher diversity of learning materials and was this useful?**

The students found the diversity helped students learn in different ways, making the work more enjoyable and easier to understand.

### **Our tutorial learning outcomes were: (1) To provide skills training in analyzing and understanding scientific literature; (2) To gain an insight into how researchers generate new knowledge. Did you think you achieved the learning outcomes and do you think this was more likely with the iPads and the eTutorial materials?**

Students felt that they had achieved them and that this was more likely since they felt better prepared from using the range of content provided. It also facilitated coordination within the tutor groups.

## **(2) Learning/working style**

### **How did the e-tutorials have an impact on the way in which you worked as a group and as an individual?**

Group participation during the tutorial was highlighted as being enabled with the iPad/e-tutorial format since everyone could contribute. Students also said that they prepared earlier, helping them learn.

### **Did the e-tutorials enable you to effectively learn at their own pace and provide a better level of differentiation in the class?**

Students thought that the use of apps helped the tutor more effectively see what level each student was at, and also share their content, enabling them to differentiate and include everyone.

### **How do the e-tutorials change the dynamic between your tutor and the students? Are students more willing to contribute? Does the tutor have more time to circulate and help students rather than being tied up at the front?**

The students thought that the tutor was more involved and enthusiastic and students more likely to participate; there were better dynamics. Also there was “more to do in the tutorials, rather than it just being a discussion”, making it more engaging.

### **To what extent does the use of e-tutorials enable you to become a co-producer? e.g. eBook.**

In the Dropsophia tutorial students were asked to write a section of the eBook. They thought that, since written by their peers, that the language was easier to understand and so helped them learn. They felt that there was a “much more co-productive vibe, much more exciting and motivating environment”

### **Is it more enjoyable and do e-tutorials have an impact on attendance?**

Students found the tutorials more enjoyable and interactive. They said that attendance was not impacted but they enjoyed going to the tutorials “A LOT more confident about what they were going to do”.

### **(3) Use of the iPads in non-tutorial setting**

#### **What else did you use it for? How often do you use your iPad, how did you do the same type of tasks last year without it?**

Overall students used their iPads for a host of academic and non-academic uses, helping them to be more organised. This replaced laptops (for everything but essay writing) and printing out papers (although some still did this) and they found it much easier to carry around (easier for commuting etc). Particularly useful was the app Notability for lecture note taking.

One other thing noted was that it was useful to watch new videos for labs that Teaching Fellow Leanne Williams has developed.

### **(4) Hardware/software**

#### **Did it work and was it easy to use? Any technical issues? Did we solve them?**

Overall everyone was very pleased with how quickly they got used to the iPad. The students found the Life Sciences setup session very useful for answering their initial questions. There were no needs for help after that initial session, so very low maintenance to our IT team, at least at the front end.

It was helpful for students to have pdfs of the lecturer slides since these were compatible with annotation software on the iPad.

There was one comment for a student that the requirement for wifi connection made it redundant if travelling with no wifi signal, and that they they had problems storing all of their documents on the free cloud servers (they had run out of free space and did not want to pay more).

#### **Any feedback on the apps installed?**

The students would have liked more use of a fewer apps. Especially popular was Nearpod and the highlight app to go through articles. They recommended Notability and were sharing app recommendations with each other (although not yet with staff).

### **(5) How do you think the project should go forward?**

Overall the students were very supportive of rolling the project out more widely so that more students can benefit. They thought they made learning more engaging and interactive, although other devices could be used to deliver the apps, and there was discussion on which devices would be relevant – the use of mobile phones as personal wifi hubs was suggested to enable wifi on iPads everywhere. Some students were even more positive: “I think that offering iPads to the Life Sciences students is definitely a great idea, and will help learning in tutorials and the rest of the course massively!” “It would be better to have them from the start of university because that way it encompasses our learning from day one, doesn’t just have to be used for tutorials only.