

Enterprise Learning & Teaching Case Study

Example/Case Title	"Be a Biotech Buddy" – Online Enterprise Game
Name	Anne Tierney & Greig Sinclair
School / Department	Institute of Biomedical & Life Sciences; Glasgow Student Enterprise
Institution	University of Glasgow
Activity	An online game which allows bioscience students to improve their business knowledge by competing against one another to find solutions to business problems with a bioscience flavour. It is not part of any curriculum, as such, but the competition aims to enhance the learning experience of students in any bioscience discipline and could easily be translated for use with students from other disciplines. Students who participate gain experience in working to tight deadlines in topics that they would not normally come across in the curriculum, and are introduced to examples of how science and business can complement one another, or clash.
Student Group	The competition is open to bioscience undergraduates at all levels (1-4).
Aims	<ul style="list-style-type: none"> • To allow more students to gain an understanding of business • To give students the opportunity to explore beyond their normal curriculum. Very often science students perceive that they can't do anything except science (i.e. work in a lab) with their degree. This activity gives them the opportunity to find out whether they are good at solving problems in other ways and maybe become interested in wider opportunities. • To encourage students to decompartmentalise their thinking; in order answer the questions successfully, students have to draw on all of their knowledge and experience, and may undertake additional research.
Context / Background	The idea began after an international summer school involving students from the Universitas 21 grouping (http://www.universitas21.com/about.html). Students with a bioscience background met scientists from around the world, and realised that in order to succeed, they had to develop business knowledge. The game was developed in order to allow more students to gain an understanding of business.
Example	All students are emailed and the competition is advertised on course electronic

	<p>noticeboards. Students are asked to register and the first forty to reply become the participants. The competition runs for one week, from Friday to Friday in mid-November; giving first year students time to get used to university, and without being so close to exams that students in other years cannot spend time on it. Scenarios are made up from current science stories in the news. Students are emailed a scenario each day, along with three multiple choice answers. Each of the answers has a weighting, according to its business/scientific content, up to a value of £10,000. Student must then justify their answer by writing 100 words in support of their choice. The first scenario is emailed to participants on the first Friday, and they are allowed the weekend to formulate their answers, which are returned to staff on Monday morning. The answers are marked on business and science content by two members of staff, each of whom can award a mark of up to £25,000 each. Feedback is emailed back to participants, along with the next day's scenario. The participants then have until the next morning to come up with their next answer and so on until the end of the week. An online leader board keeps students informed as to how they are doing in the competition. At the end of the week, the winners are announced. The winner gets £150 and two runners up get £100. The prizes are handed out at an enterprise evening which provides an enjoyable opportunity for students from all faculties to mix.</p> <p>Details of the competition can be found on the <i>Student Into Enterprise</i> website at http://www.sies.org.uk/buddy.html</p>
<p>Results / Feedback</p>	<p>Two members of staff are involved in the competition; one with a biology background, the other with a business background. The competition involves a concentrated effort for the week it runs, as both staff members have to put aside enough time each day to read, mark and feedback on the student answers. Feedback is emailed to the students in the form of general comments – it is found that students give similar reasons to justify answers. Any answers out of the ordinary or innovative in their approach are also commented upon to give the group ideas of how to tackle the next scenario.</p> <p>Students are asked for 100 words to justify their answers. They are not asked to provide background material or source references, but many of them show evidence of having researched the topic. The students take the competition very seriously and the standard of answers is very high; much higher than staff anticipated.</p> <p>The competition is unusual in that it does not form part of the formal curriculum of any student; however, students have commented that it helped them to “round out” their thinking about science topics, by looking at them from a different point of view. Students enjoy the challenge and novelty of the competition, and many of them have participated for two years. A short questionnaire was sent out to students at the end of the competition in 2005 and feedback was very favourable.</p> <p>Students were asked:</p> <p>'Is this a good way to learn about activities outwith your normal curriculum?' Response: Strongly agree 50% Agree 50%</p> <p>'Would you participate in this kind of competition again?' Response: Strongly agree 53% Agree 47%</p>

**Further
comments or
information**

Scenarios

Scenarios are taken from science stories in the news, and therefore can be on any topic. The team have found one of the easiest ways to trawl for topics is to have an online newspaper emailed to them every day so they can peruse the headlines. Characters have also been brought into play in the scenarios– Farmer Giles has been the unfortunate victim in a number of scenarios involving GM crops, sub-letting his land to a company installing high energy tetra masts and Avian flu. The competition is not confined to bioscience – any discipline could make use of the structure of the competition to write scenarios which challenge the students to think.

A typical scenario can be found below:

A Case of Avian Flu

After a disastrous foray into GM crops a few years ago Farmer Giles decided to turn to organic farming and stocked up on organic chickens. Now with the possibility of Avian Flu hitting the UK he is left with a dilemma, what should he do?

a) Keep farming organically, allowing the chickens a free reign. After all the impact on humans is minimal and people pay a lot more for organic foods.

b) You're better being safe than sorry but on the other hand you've a business to run - lock the chickens up to ensure they won't be in contact with wild birds and sell them as non organic.

c) You can't take any risks with human health. Slaughter the flock and move into something else, you owe it to your staff.

Student participation

It is amazing the detail that goes into the students' 100 word answers considering that the activity is not part of their course and that the deadlines are tight.

As the competition is not a formal task, it is inevitable that students drop out of the competition. This is usually due to pressure of studies. In 2006, of the original forty students who signed up for the competition, 70% returned the first scenario. Subsequent scenarios had a return rate of around 50%, dropping to 37.5% for scenario 5. This is not unexpected, as some students who saw that they could not win the competition may not have been motivated to return the final scenario. It is interesting to note, however, that the return rate did not drop between scenarios 2-4, and that students were motivated to participate in the competition.

Tips for anyone thinking of giving it a go:

- **Advertise the game in advance.** We send out emails to all Bioscience students and back the email up with announcements on class noticeboards. The students are then given a couple of weeks to decide whether to sign up or not.

- **Encourage the students to stay in the game.** Some students drop out if they miss a scenario or have a couple of scenarios with low marks, but the actual winner of last year's competition was not in the top five until the last day. We have no idea who the winner will be until the last scenario.
- **Don't underestimate the students.** They take the game seriously and often come up with answers backed up by evidence and references!

Would it work with larger numbers of students?

The number of students is capped at forty because this is manageable and allows for a quick turnaround. Having only two markers restricts the number of students, however, given that there isn't any time to double mark or compare marking criteria (feedback is returned the same day), having a larger group and splitting the marking would also pose problems. There is also the question of feedback - a general feedback is sent to all students, one part written from a business point of view and one part written from a scientific point of view. More markers would also make that more difficult to co-ordinate.

Having said that, if there was a tight-knit group of markers who could mark quickly and efficiently, there is no reason why this could not be expanded. We have thought about making the deadlines longer (48hrs per scenario) but have concerns that more students will forget to answer, although an extension would definitely make it much easier for the staff!

Please attach any supporting documentation, e.g. assessment criteria, module descriptor etc.