

Introduction

A common problem for teachers of first year students is stimulating their desire to learn.

Many students associate their need to know something with the marks that might be earned. At times this can impede their learning (Boud et al 1999).

Students of Complementary Medicine are not always aware of why they need to know basic physiology before they reach the stage of being able to apply their knowledge to patients.

In an attempt to inspire a sense of excitement and desire for learning, an enquiry-based learning (EBL) session was run in order to persuade students to see what lies beyond their current knowledge and to motivate them to learn more.

The reproductive system was chosen because all students know something about it and are likely to have an interest in it, whether from previous biology or sex education.

Aim

To inspire students to see why knowledge about basic cellular and molecular biology will help them to learn more about aspects of a physiological system that really interests them.

Harnessing what is already known

A short introductory session established that all students knew:

- How babies are made
- Male and female anatomy
- Something about hormones
- Something about sperm and eggs
- That women have monthly periods

Arousing curiosity

The session then moved on to looking at human sexual reproduction in more depth. Humour is a very useful tool in teaching, as it helps students to relax and become more receptive (Garner, 2005), so this session was intentionally light-hearted.

Getting the students to think about the 'how'

Some deeper questions were then posed to the students, and they were encouraged to pose some questions of their own that they may have wondered about.

Questions included:

How does an egg find its way from the ovary to the uterus?

I know that a sperm and egg fuse at conception, but how does this make a completely new human being?

How come only one sperm can penetrate an egg?

Why do men produce so many sperm, when women only produce one egg each month?

How many sperm are present in the average ejaculation?

Why does a woman's reproductive capability end in middle age, whereas men's continues through to

Students were asked to choose a question that they genuinely wanted to find out the answer to. They were then sent off for an hour to see if they could find an answer, or better still, some other questions that would need to be answered before they could answer their chosen question.

They were advised to work in pairs or small groups, and could use whichever resources they wanted. Suggested sources included textbooks, the Pearson web-based physiology resource 'My A&P', the library and open-access computer labs.

The group then reconvened for a plenary session.

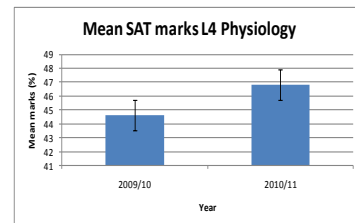
Student feedback

The session received overwhelmingly positive and enthusiastic feedback:

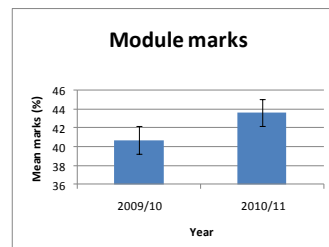
- "I hadn't realised how clever the body is"
- "I'll need to learn a lot more before I can understand this"
- "This is such a great way to learn"
- "This is so much more complicated than I thought"
- "The first session we did made me feel really excited about the module"

And did it help?

The Short Answer Test (SAT) held later in the 1st term yielded higher marks than for the previous year:



Overall module marks, before summer retakes, were also moderately higher than the previous year, although still on the low side:



The aim was to inspire students to learn and to see why learning about the details of physiology helps them to understand how the body works. It was intended that the initial EBL session primed the students to embark on their Physiology learning in a spirit of enthusiasm. The results of the usual formal assessments do not measure the concepts of 'inspiration', 'enthusiasm' or 'stimulation', so cannot assess whether this aim was met, and it cannot be denied that sooner or later, students must get to grips with studying the science. However, the response was sufficiently positive that we will continue to use this approach next year.

What would we do differently next time?

The session appeared to work well, but the SAT marks were still on the low side, albeit better than previous years.

Next year, we will incorporate the EBL method into some tutorials and link them to an EBL assessment.

Conclusion

Using EBL is a good way of priming the students to view learning as something which can satisfy their own hunger for knowledge.

References

- Boud D, Cohen R, Sampson J.(1999). Peer Learning and Assessment. *Assessment & Evaluation in Higher Education*. 24 (4), 413-426.
- Garner R. (2005). Humour, Analogy and Metaphor: H.A.M. it up in teaching. *Radical Pedagogy*. 6 (2) ISSN 1524-6345.