

# USING EXAM STYLE QUESTIONS TO CONSOLIDATE LEARNING

Marie Porter, SAMS UHI

## KEYWORDS

Revision, small group work, consolidation, problem solving

## SUMMARY

It can be difficult to help students understand the complexities of university level exam questions without losing lots of class time to exam practice.

Provide the students with one exam style question at the end of each lecture, with the answer at the start of the next one.

Ask the students to work together to write exam style questions and model answers before putting them onto Brightspace to share between the class.

## CONTEXT

At SAMS students on the UHI marine science degree are required to take a multi-disciplinary approach to the subject. They are expected to pull many strings of information together when they answer their continuous assessment or exams. However, as students move from high school or college into university they often struggle with the complexity of exam questions. These questions often rely on using problem solving skills to fully understand what the answer much contain and will require the skills and knowledge of multiple aspects of the course material.

In the first year of their studies (level 7) it is important that we start to introduce more complex questions so that the students are ready for this. The method of introducing these questions, described here, is used in a level 7, Introduction to Marine Physics class, a face to face class. The discussion here could be modified to work in a distance learning environment.

These examples of the use of exam style questions in day-to-day teaching can be used in both large and small groups, without much impact on the teaching load.

## WHAT, WHERE?

This discussion will focus on two methods of incorporating exam style questions into the lecture environment. First, end of lecture examples will be discussed and then how to work with the students to write example questions for the class.

After each lecture the final slide my final slide is a complex exam style question based upon the material covered in the lecture. The students are then given an opportunity to ask any immediate questions. They are then asked to work with each other out of the lecture to progress toward an answer, which they will bring to the next lecture. It must be stressed here that the important task is to

understand the method, not simply to get the correct answer and that those who do understand the question should work with the rest of their group to ensure that they all do.



The question can be multi-step, include calculations or written answers. The most successful questions require more than superficial study of the lecture, challenging the students to think in more depth about what the question is actually asking and how they propose to answer it. The first slide of the following lecture shows the model answer, including all steps on calculations. This solution is not discussed in class, but it is emphasised that the students should work together and help each other. If as a group they are unable to understand the method, they should then approach the lecturer.

The second method of incorporating such questions into day-to-day teaching is by asking the students to write the questions themselves! It is important that the students understand what exam questions look like before setting this task and so this is not an appropriate task in the first few lectures.

In a face-to-face class start by splitting a large class into small groups or a small class into pairs and ask them to think about the material covered in the last 2 (any appropriate number) lectures, this could be done in online discussion groups for distance learners. Each group should then write an exam style question (ideally multi-step) and the solution. It is important that each member of the group understands the question and the solution. The lecturer then gathers these in, checks them and adds them to Brightspace to provide extra revision materials for the students.

### **WHY?**

It is important that our students are able to judge for themselves whether or not they are keeping up with their modules. This provision of questions gives them the opportunity to use self-directed study to make these judgements. The emphasis on working together means that stronger students have to think about how to structure answers and discussion to help their weaker peers, consolidating knowledge and improving understanding for both sets of students.

By writing their own questions the students not only have to revisit material, but also to see how this material can fit together to make a coherent multi-part question. They also start to understand how exam questions are structured making it easier for them to tackle questions under the pressure of exam conditions. The questions can all be saved to make an increasing bank of revision material for upcoming years.

### **DID IT WORK?**

The students have reacted positively to the increased number of examples of exam style questions, regularly engaging with the self-directed work and feeling personal achievements when they are successful. While writing the questions students enjoy the creative challenge and the break from the traditional lecture environment. With the introduction of these examples, both grades and student satisfaction have increased.

### **WAS IT WORTH IT?**

The introduction of these questions into day-to-day teaching requires only a small level of extra work for a large perceived difference in student understanding. By emphasising that these questions will not be covered in class and that you expect people to work together the end/beginning of lecture questions do not take time from the lecture slots. The

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student written questions take more time and proof reading before being added to Brightspace, but provides a learning experience both when the questions are written and when the students use them for revision purposes.

**If you wish to submit your own case study, or have any questions about this resource please contact:**

Dr Heather Fotheringham

Evidence-Based Enhancement Lead

[heather.fotheringham@uhi.ac.uk](mailto:heather.fotheringham@uhi.ac.uk), 01463 279237