

## SIX WAYS TO WRITE EXAMINATION QUESTIONS THAT DISCOURAGE COPYING OR CUT-AND-PASTE WRITING

Teachers want students to learn something by doing the examination and they want students to show what they have already learned in their solutions or answers. Teachers hope students will ask themselves questions such as:

- *What does this examination question mean? What is it asking me to do?*
- *What do my lectures say about this question?*
- *How should I organise and structure the answer I give?*
- *Where should I start?*

and so on. In fact, most students do start their home examination assignments with these sorts of questions. But a significant minority start with different questions:

- *Can I do this examination well (or well enough) to get a good mark?*
- *Has someone else already addressed this question / topic and if so, can I find the result of that other person's work?*
- *Is it worth me putting in the time and effort to do this examination or should I spend my time on other assignments? Should I spend time doing something else?*
- *If I copy or if I go and find someone else's answer, will I be caught by the teacher?*
- *If I am caught in copying, what will happen?*

and so on.

This handout suggests how to set examination questions which encourage students to make (rather than to find or fake) answers. It suggests strategies which stop students thinking along the lines of the second set of questions. Examples and cases are used to illustrate each suggestion. These examples have been collected from KTH teachers and students.

**SUGGESTION 1: Do not set examination questions or problems that already have an existing answer.**

Many examination questions have been answered by someone already, long before the student tackles that question. Many problems, too, have been thoroughly explored - students know this. In fact, students say that as soon as they sense there is a pre-existing answer or solution, it can seem almost pointless to create one themselves.

Teachers will increase the chances that questions and problems start students thinking (instead of memorising or Googling), if the teachers:

**1.1 Choose an ‘action’ verb for the examination question.**

By asking students to *rank, plan, alter, or invent something*, the examination question signals that there is work to be done. The same is true for verbs such as *‘categorise’, ‘produce, compare, select, rate and justify’*. Questions which start with such words are less likely to have ‘ready made’ answers

**1.2 Avoid setting topics as questions.**

‘Nanotechnology’, ‘Genetically modified grain’ and ‘sustainable development’ is just asking the student to find and copy.

**1.3 Avoid questions with verbs that ask students to show their knowledge, especially in home examinations.**

Words like *‘describe’, ‘identify’, ‘list’, ‘recount’, and ‘draw upon’* usually send students to Wikipedia or Google which almost do the work for them.

A question saying ‘Google’	<i>‘Describe the ways in which the Swedish Environmental laws are used to protect wilderness forests’</i>
A question saying “Google then think’	<i>‘Judge the effectiveness of Swedish environmental laws on the protection of etc....’</i>

In observed, timed examinations, words like those in 1.2 can encourage students to pre-memorise answers.

An examination passed by memorisation	Six students identified a pattern of questions and topics in past papers. They knew the exam would require 3 answers out of 6 choices. They jointly wrote ten answers and memorised them. All predicted topics came up, and all six students passed the examination.
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One alternative to examination questions which are asking students to show their knowledge would be to set questions for observed examinations which ask students to use their knowledge to create an answer. The question could refer to a case, problem, situation or set of data provided in the examination paper. That way, students can show what they have learned, not just what they have memorised.

**1.3 Avoid setting home examination questions about common or ‘popular’ problems which are well-known in the discipline.**

Questions about managing a diverse workforce, or about information security, or even about seemingly specific topics such as the impact of smoking on public health are easy to ‘Google’. Even if the question is less generic, students can easily find something close to the topic and quickly shape their answer to fit.

**1.4 Set new questions each time the course runs.**

Students report no difficulty in finding answers if they suspect (or know) that the questions have not changed from the last time. This is true even if the previous work was not returned to students since most can describe easy ways to access others’ assignments or to locate informal collections of past student work (and some collections are now located outside of particular universities and can be accessed worldwide).

This advice about changing the questions holds true even if the student is taking an observed examination. Teachers at KTH can tell stories of colleagues who gave students the same examination as a retake examination and then being surprised when answers came back mirroring those in the first run ‘... *to three decimal points*’.

## **SUGGESTION 2: Avoid questions that make it very easy for a student to copy from other students**

This kind of copying between students is common if the assessment task/problem has one answer or a small number of ways in which the problem can be solved. It is best to avoid such questions. Instead, the teacher could:

### **2.1 Give students individualised data or individual resources**

An example of an individualised task	KTH students were asked to select a recent article <sup>1</sup> which was relevant to their dissertation topic and to critically review it. Even though students used a similar template to structure their writing, each student's paper was unique.
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### **2.2 Ask students to use their personal experiences, experiments or activities to make an answer.**

## **SUGGESTION 3: Avoid questions that are generic or dated.**

The longer a question has 'been around' and/or the more general the question is, the more likely it is that students can find a great deal of material about it, perhaps using even the most rudimentary internet search. Generic questions such as 'what is Boyle's law?' are obviously just asking for a Wikipedia hit but so are less obvious Google-targets such as 'What is the future for OPEC as a decision-influencing body?' or 'How would an Anthropologist analyse the European Song Contest?'

Instead of asking generic, dated or common questions, a teacher could:

### **3.1 Ask about local topics.**

For example, instead of asking a question about 'waste recycling', ask about waste recycling in Stockholm. Or in Lidingö.

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<sup>1</sup> By 'recent', we mean since the last time the course was run since students can easily find others' examples of this task.

**3.2 Ask about specific topics.**

An example of how to make the topic specific	A KTH teacher is aware of the danger of letting the student select their own topics – they might just find a good resource and shape their 'interest' to that. So he asks them to select the area or general issue then creates a specific task within that area for consideration
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**3.3 Ask students to refer to recent topics such as legislation, current events or recently published material in the media or in relevant academic literature**

A question referring to recently published material	Students at the beginning of their KTH Masters were asked to select a recent media story relevant to waste reduction or recycling. After a brief description of the article (i.e. saying what it was about), students were asked to discuss the article in the light of topics they had covered in class, supporting their own views with facts and references to the text book
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**3.4 Ask students to apply generic theories to specific cases or data.**

These could include experiments the students have carried out, projects they have done, or clients/patients they have worked with.

**3.5 Ask students to include reference to specific texts, notes or class activities in their answers. (See 3.3 above)**

**SUGGESTION 4: Do not set examination questions that require students to use skills before they have been taught to use them**

Some students will just figure out how they should do their work. Some will notice, for example, how citations are used in academic texts or they will teach themselves to use certain pieces of equipment. Perhaps a fellow student teaches them a particular mathematical function or they figure out for themselves how to write a computer programme. But most students need their teachers to instruct them in these things.

Students who feel the task is beyond their skills often feel they have to copy rather than make an answer.

An example of a task set before teaching the skills	At the start of the course, a KTH teacher asked students to <i>'Write a critical review of two research papers'</i> . Most of the papers came in full of copying. Students copied from the papers themselves, from other students, and from the lecture notes
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An example of a question set before skills teaching, the redesigned to guide students	At the start of a Masters course, the teacher asked for a critical review of a paper. He used a template with specific instructions ( <i>'What is the key finding in this paper? ... List two facts or points that support the main point' 'State four sources of evidence and say how reliable each source.....etc).</i>
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However, the teacher needs to be careful not to create another problem – i. e. that of students copying each other. Examples in section 3 above address this issue.

## SUGGESTION 5: Do not make the examination questions too hard.

This is not the same as saying 'Make the questions easy'!

A question which is probably too hard	[In an Urban design course:] <i>Redesign the Slussen interchange in Stockholm to allow twice the number of cars and people per day to move into and out of the area at four times the current speed.</i>
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Would students see this question as a challenge or as a threat to getting a good grade? Would the students start to make their own answer or would they start looking for someone else's answer?

Instead, you could:

- 5.1 **make the examination task smaller** (*List the four most important aspects to consider if you were intending to increase travel etc.....*)
- 5.2 **provide more guidance to students on how to do it**, (*Using the 1998 report on traffic flow in Slussen, identify three ways in which the 2008 traffic etc'*)
- 5.3 **set the examination as a group task** rather than an individual one so students can pool ideas and resources
- 5.4 **ask students to provide only an interim step** as their answer instead of the finished report, product or item. (*State three factors that any tender to redesign the Slussen traffic flow would have to include and justify your selection with reference to...etc....*)

Note: see suggestions below about ensuring students do not copy from each other.

**SUGGESTION 6: Make it clear in examination instructions which parts of the student's work / answer will count towards the student's grade.**

Grading criteria often state which aspects will be judged for a grade and students can usefully have these aspects drawn to their attention. For example, teachers can point out that the student needs to be focussed on the presentation and the research process as well as the discipline-specific content of their thesis since all three are considered when allocating a grade. This helps to clarify what 'work' will be assessed and therefore, what work must be the student's own.

The brief may need to specify whether or not proofreading is acceptable. It may need to state who may help – for example, with locating and selecting sources or how much help from fellow students is encouraged. Conversely, the brief can say where such help should stop.

Teachers often say, 'Students should ask us if there is anything they do not understand'. However, students often say they shy away from taking such matters to teachers, assuming they should use tutorial time for 'interesting' questions instead. When asked, students describe 'interesting question' as questions about the subject itself or the content of their work rather than how it should be done.