

► **Discussion: what can you *do* during lectures?**

- 1 **Looking at the lecturer.** There's no guarantee of high learning pay-off from this one! If you *don't* look at the lecturer, you may give the impression that you're not interested, but it is possible to *look* attentive and interested even when your mind is completely on something else.
- 2 **Looking at the board or screen.** This isn't enough for high learning pay-off. You'll quickly forget most of the things that you see if you just *look* at the board or screen. To achieve high learning pay-off, you need to be *doing* something with what you see.
- 3 **Listening.** This can have high learning pay-off, but only if you are really listening *actively*. The best way to make your listening active is to give yourself the job of *capturing* what you are listening to. This means making decisions about it, in a form where you force yourself to think, and capture your thinking.
- 4 **Taking notes: copying things down.** Sadly, the learning pay-off from copying things down is quite low. It's the *copying* that is the problem. This is a low-level task (even if you're very busy doing it!).
- 5 **Making notes: capturing things for yourself.** This has much higher learning pay-off than 'taking notes'. We will look at some ideas regarding *how* to make notes later in this section of the chapter.
- 6 **Asking questions.** This is an active process, and can have high learning pay-off for the person asking the question. However, you don't always get the chance to ask questions. Even when asking questions is encouraged, it would be impossible for every student to be doing it all the time during lectures! Therefore, even though it is a high learning pay-off process, it is relatively low in frequency, so is limited in its overall effectiveness.
- 7 **Answering questions.** This can have high learning pay-off for the person answering the question. If the whole class is actively engaged in answering questions (for example, filling in answers on handout materials), the overall learning pay-off can be really significant. Unfortunately, most lectures are not built around getting students to answer questions.
- 8 **Writing down questions.** This can have very high learning pay-off. Even though you can't always *ask* questions in a lecture, you can always write down the questions you might have liked to ask. This gives you the chance to follow them up later. If you *don't* write down such questions during a lecture, there is every chance that within an hour or two

you will have entirely forgotten what the questions were, and then you have no chance at all of following them up.

- 9 **Discussing things with fellow students.** This can have high learning pay-off. Some lecturers realize this, and devise various tasks for students to do *during* lectures, which help them to think actively about the topics being covered in the lecture. If, for example, you explain something to other students around you, you necessarily move towards sorting out your own thoughts and ideas about what you are trying to explain, and you will find that you remember such thoughts for a long time after the lecture. However desirable such discussion elements are, not all lecturers like them! You may need to undertake your own discussions with fellow students *after* a lecture rather than during it.
- 10 **Doing exercises and tasks.** This can have high learning pay-off. In lectures in maths and science disciplines, lecturers often set problems and tasks to be done in the large-group situation. These involve learning by doing, and also learning from feedback after you have had a try at the tasks. Make the most of such opportunities to do some real learning in lectures. Also, take particular notice of the tasks and exercises themselves: they are often dry runs for things that you will be required to do later, in exams!
- 11 **Thinking.** Thinking *should* have high learning pay-off. Unfortunately, even one's best and deepest thoughts tend to evaporate. It is therefore necessary to *capture* our thoughts before we can claim high learning pay-off. Capturing your thoughts during lectures by making notes of them is the best approach. It is often just as important to capture your own thoughts about a topic as to write down what the lecturer is saying about it. Thinking is also rather difficult to control. How often have you sat in a lecture room and found your mind wandering far beyond the content of the lecture?
- 12 **Getting enthused about the subject.** This can be the *cause* of high learning pay-off to follow. This is one of the most significant benefits to you of the best lectures you experience. If you are enthused, there is much more chance that you will go deeper into the topic after the lecture, and research it. This is where the real learning pay-off is delivered.
- 13 **Comparing yourself to other students.** This can be a very useful thing to be doing in lectures. You can often tell how your own learning matches that of the people sitting around you. Watch their body language for clues to this. Take note of whether other people seem to be able to answer questions that you can't yet answer yourself. It is very useful to have an accurate picture of how your learning is going compared to that of other people. If you're ahead, don't be complacent, but aim to keep ahead: remind yourself that *you* are working towards a good degree. If you find yourself behind other people, the answer is obvious: do something about it!

