

Why lectures are a waste of time

Eugenia Cheng
University of Cambridge
September 2001

lecture *n.* 1 An act of reading. 2 An address or discourse on a particular subject. 3 A formal discourse delivered to students etc. by a teacher at a college or university. 4 A lengthy reprimand.

Lectures are, in general, a terrible way to learn things. I doubt that I have ever seriously learnt something from a lecture; I have only learnt things from studying the notes afterwards. So, why do we still bother having lectures? Why do we not just take a copy of the text and go home?

Lectures originated from the days before printing presses, when there was no way of ‘just’ taking a copy of the text home except by writing the text down as it was being read out. Indeed, this was the point of the lecture. Since this is no longer a necessity, are we simply maintaining an old habit that should be obsolete?

What is a lecture?

A lecture generally consists of someone standing at the front of the room talking, and a large group of people frantically trying to write down everything being said. Sometimes lashings of modern multi-media technology may be thrown in; in maths lectures, this tends only to go as far as blackboards, and the listeners copying down exactly what is written on them.

Too many people

A lecture, by definition, has too many people in it. It has too many people for any meaningful interaction, and therefore too many different abilities to be catered for simultaneously. If it had few enough people for interaction, it would be a seminar or a class. A lecture is inevitably a one-way delivery of information, too fast for some people and too slow for everyone else.

Swallow it now or miss it and it's gone

Receiving information in real time is difficult because it necessitates keeping exact pace with the information arriving. This is not necessarily just a case of 'too fast' or 'too slow'. Different people catch onto different ideas at different rates. In a lecture, if you stop and think about an idea, you will miss the next one. There is no time to understand the things that are hard, and no time to explore the things that are interesting. This is a particular problem in disciplines such as maths where the material is cumulative; if you lose the thread for a moment there is little chance of re-entering the argument.

The way ahead: be brain dead

Imagine a group of people being fed by an automated feeding machine that places spoonfuls of food in each mouth at preset regular intervals. However, different people and different foods require different chewing times. (I have done an experiment on two people and raw carrot. One person chewed sixteen times; the other I gave up counting when he reached one hundred.) How fast should the machine go? If it goes slowly, some people will have to sit around wasting their time waiting for the next mouthful. If it goes faster, some will end up with more food forced into their mouths while still chewing the previous mouthful.

The answer, of course, is doggy-bags. Each person should be equipped with a doggy-bag so that when food arrives too soon, it can be taken home and eaten later. However, if someone insists on eating main course before pudding they will need to finish the main course from the doggy-bag before eating the pudding from the machine. Of course, while they are eating the main course *from* the doggy-bag, they will also have to be putting the pudding *into* the doggy-bag as it arrives. So it would be easier just to take the whole meal home in the doggy-bag in the first place, and ditch the machine.

The same holds for lectures. The solution most people find is to stop trying to assimilate the information being presented, and just write it all down and think about it later. So would it not be easier just to take the notes home in the first place and ditch the lecturer?

The question of handouts

My own experience of going to lectures is this. Taking notes means writing down one thing and listening to another at the same time. If there are no handouts, I am convinced that I would be able to understand what was going on if only I didn't have to write it down. But if there

are handouts, I might as well take the handouts and go home. (Anyway, can't the lecturer just make them available on the web?) However, it might be better to attend if the handouts do not contain absolutely all that is presented in the lecture. But in this case it is so hard to insert the extra bits into the printed notes that it is often easier just to take a complete set of notes myself.

Lectures are too long

This is a fact.

What is the human being there for?

This is the question that should be asked by everyone, including the said human being, since all the above comments point to printed reading matter rather than live human beings. Surely a live human being can add something to the learning process? What is the difference between reading a book and being told a story? Personally, I would rather read a book so that I can fast forward and rewind as I choose. Oh dear.

What is the difference between reading a script and going to see a play? There are obvious differences in the form of action in front of us – costumes, props, movement around the stage. Should a lecturer dress up and wave objects around?

A production of a play is, of course, more than the props and costumes. There is something in the delivery of the words that conveys emotions to us directly, whereas when we read a script there is a certain amount of emotion that we must inject ourselves. So is the task of a lecturer to convey emotional information to us? Isn't academia supposed to be a rational discipline?

Lectures are at the wrong time

By this I do not mean that they are too early in the morning, although this usually does happen to be the case (unless they are too soon after lunch or too late in the day). In mathematics at least, the role of a lecture is to teach new material. But we would probably benefit more from the input of the lecturer if the material were not *completely* new to us, but rather, slightly familiar and requiring further elucidation.

Speaking the written word

The difference between spoken language and written language is not as distinct in English as it is in some languages; the difference tends to be a matter of style rather than formal

differences of grammar or vocabulary. However, the difference is there. In some disciplines it is standard practice for a lecture to be written as a paper (approximately twenty pages for an hour?) which is then read out. Aside from all the above points, there is the question of style. The easiest way to understand *written* language is to read it from the page; the easiest sort of language to understand aurally is *spoken* language. A good essay should make a terrible lecture, and vice versa.

The opposite of the best way of learning

For me personally, the best way of learning mathematics is private tuition. Obviously this is not always practical, but the smaller the group the better. On this scale, a lecture is the worst possible way of learning. The only advantage of a large group over private tuition is social, but if I want to be sociable I can always throw a party.

So a lecture is a practical compromise, which is always bound to be a bad thing. But given that practical compromise is necessary, how can we improve the situation as much as possible?

Do not expect to understand

This is most important for maths lectures. Simply put, mathematics is difficult to understand first time round. This is probably true for most people in most disciplines as well. Apart from for a few lucky geniuses, fluency in a new idea is unlikely to be immediate. It takes practice, and where ideas are concerned this means hard thought. So nobody should be expected to understand things in lectures. The hope is that we go away from the lecture sufficiently *equipped* to be able to do that practice, and sufficiently *motivated* actually to go and do it.

Be emotional

An academic discipline should not be emotional, but our engagement with it should be. This is where the lecturer's human input comes in; a lecturer can convey something of their emotional involvement with the material, as long as the listeners are open to receiving it. A conductor can convey intense emotions to an orchestra, but only if they are looking at him.

What are lectures good for?

I have so far presented a rather one-sided view, when in fact there are some advantages to lectures. Lectures are good for ogling celebrities if it happens to be a celebrity lecture. They are

good for getting hold of the notes from the previous lecture that you missed. They are good for sleeping, or at least, they would be if only the person at the front would stop talking.

Conclusion

In conclusion, we should all ask ourselves whether or not the person at the front of the lecture is adding anything of value to the raw information being presented. If not, we should wake up, metaphorically or otherwise, and spend our time teaching and learning properly.