53 Powerful Ideas All Teachers Should Know About

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Much of what is learnt is forgotten

I can clearly picture an eminent Economics professor from my first year as an undergraduate, many metres away in a steeply raked lecture theatre, as I sat crouched over my notepad in the back row. I can even remember his tone of voice and body language as he started a lecture in his characteristic way: "Inflation. What do we mean by inflation?" I remember no more. I have no recollection whatsoever. I recall that I had a standard textbook, that I read each week, but I cannot even remember its name. I somehow passed my Economics exam but I have no memory of what the questions might have been about and if I sat the same exam today I am confident I would fail it and probably have little grasp of what the questions were even about. In the politics course I took, I can picture the Lecturer condescending to us through a cloud of cheroot smoke in a seminar, but I have no recollection of what topics we discussed. In Sociology I remember that we had to read Durkheim and Weber, and I can remember that I found them hard going, but I cannot remember much about what they said (something about suicide?) or even the names of any other theorists from the course.

This is normal. Most of what we are taught, much of what we learn, is lost, or at least not easily retrievable. It is possible that some of my economics course is buried in my brain somewhere and that a cunning set of prompts might enable me to retrieve a few fragments. But it is certainly not available to me as I read an article in the newspaper about some national economic issue and try to remember what Gross Domestic Product includes and what it does not. The content of Macroeconomics 100 from over 40 years ago does not come to consciousness even when prompted by the use of technical economic terms in the newspaper article.

Doctors may pass their Anatomy exam and qualify as a doctor and yet forget quite where the Brachial Plexus is, and what the ability to move one's hand in one orientation but not in another might signify about where nerves might have been damaged. Luckily if you are a GP the chance of you ever needing this information is slight. Psychology graduates would probably have to think hard about what the crucial difference is between classical conditioning and operant conditioning, and yet every Psychology course addresses this in detail in the first year. Luckily most Psychology graduates (and indeed even professional Psychologists) never experience a need for much knowledge about classical conditioning.

Sometimes this forgetting is due to an almost total lack of attention at the time. The stuff never really 'got in' in the first place - as in my lecture on inflation. I suspect my attention wandered shortly after the introductory sentence.

Sometimes the information is only ever memorised rather than understood: for example writing down a definition of inflation in lecture notes without knowing what it really means. If you take a 'surface approach' to learning X (with an intention to reproduce material) then you may be able to pass a test on X that only requires you to regurgitate, and which takes place quite soon afterwards. But even if you can pass such a test you are then quite likely to forget X almost completely – and perhaps within only a couple of weeks. A long term study of what Cognitive Psychology students at the Open University could remember about their course, some years later, found, first, that they had forgotten almost everything, and second, that exam scores did not predict how much they could remember. The clue to what was going on was that their coursework marks did predict long term recall of concepts. The kind of learning students usually do for exams often has short-lasting consequences, while the kind of learning they do when they are trying to understand something well enough to write about it in assignments often has much longer lasting consequences. This is termed a 'deep approach' – an intention to make sense, to understand, to relate ideas together, and so on, rather than simply to replicate or memorise the material unchanged. It requires active effort and thinking and this thinking leaves its mark in memory. Even if you have no intention to memorise, if you take a deep approach then in the long term you will remember a lot more than if you initially attempted to memorise. It is as if the mental processing you do when thinking lays down a record that can be re-run, like some computer code being activated. Recall may involve re-running the processing that was used before rather than simply 'finding' something that has been 'filed'. If you did not do much processing at the time then there is nothing much to re-run later when trying to remember. In fact much memory is what Psychology texts used to mention in a few sentences at the back of the chapter on memory and term 'incidental memory' – incidental in that it is an automatic and inevitable by-product of being engaged in the world, rather than a result of deliberate attempts to memorise. It may be possible for some people to use mnemonic tricks with small proportions of course content, without needing to understand the content, but it is not how the brain normally operates, and mnemonics may not be very useful, except in exceptional circumstances, outside of examinations. To remember stuff in a useful way in the long term you have to try to understand it.

Sometimes a student does take a deep approach, is able to think about and use ideas for an assignment, but then has no further use for the information or ideas ever again – and

so forgets. My dismal performance in Economics and Sociology was not because I have a rubbish memory. Nowadays I am actually quite good at remembering educational ideas and examples of those ideas, because I use these on an everyday basis to make sense of educational phenomena I bump into, and to explain things to others. Longer term memory often requires use – getting the ideas and information out of memory and brushing them off by using them to do something. This memory is then more elaborated, re-stimulated, better connected and better able to be accessed and used again in the future. If memories are not re-used they tend to be more difficult to find or reconstruct.

This is a problem in courses where topics are simply a list – just one damn thing after another, each touched on just once – rather than involving revisiting earlier material at ever greater levels of depth or sophistication or linking up material in integrative structures as you go along. It is a particular problem with highly modular degree programmes that have no hierarchical structure or progression, and where, as a result, ideas and information learned earlier are seldom revisited or built upon later. If each module is in a new unrelated domain then longer term memory of previous course content may be much harder to achieve. After my first year at University I abandoned Economics, Sociology and Politics and concentrated on Psychology, which I found easier to 'join up' than disparate disciplines, and this made it much easier for me to build up some related knowledge structures that helped me to re-use and remember what I had learnt in different contexts.

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