

Mind Mapping in Lectures

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Introduction and History

Mind mapping is a very old technique which has been used for centuries for brainstorming, visual thinking and problem solving in all subject areas. Some of the earliest examples date back to the 3rd century where these techniques have been used by the famous Greek philosopher Aristotle. However, it was not until the 1950's that the link between mind mapping and effective human learning was discovered (seminal work was carried out by Dr Allan Collins and Ross Quillian in the 1960's).

This method has been further developed by Tony Buzan who argues that traditional learning methods force the student into scanning left to right or top to bottom. Mind mapping gets the student to scan the whole page in a non-linear fashion. While this maybe be true, I see mind maps as *a complimentary method not a substitute* to traditional learning methods (reading (books/articles etc), listening (lectures), seeing (video and observation) taking notes and interactive learning (Internet, Blackboard))

Method

Mind mapping is the graphic use of short text, lines, colours, boxes, arrows, branches, and symbols to graphically display information in an easy to understand way. They are normally on one page and start in the centre and work outwards. Mind maps can be very complex or fairly simple but the aim is the same *'to structure, remember and show linkages between information and ideas both quickly and easily'*. Mind maps can also be used to show how different lectures in a module/course link together (however this is much more advanced use of mind mapping tools). By personalising the mind map with your own symbols and designs it makes it easier to remember and recall. You should always leave lots of space on your mind map.

Good books and articles on this subject are:-

- Buzan, Tony (1991) *'The Mind Map Book'*, New York: Penguin
- **Buzan, Tony (2002) *'How to Mind Map. The Ultimate Thinking Tool That Will Change Your Life'*, Thorsons [Particularly good for students] cost £6.99**
- Novak, J.D. (1993) How we learn our lessons? Taking students through the process', *The Science Teacher*, Vol. 60. (3), p 50-55.
- Nast J. (2006) *'Idea Mapping; How to Access Hidden Power, Learn Faster, Remember More and Achieve Success in Business'*, John Wiley & Sons

N.B. The term Mind Maps has been trade marked by Tony Buzan *'The Buzan Organisation Ltd'* in both the UK and USA

How To Use It In Class

I use mind mapping in three major ways in my teaching/lecturing

- i) Sign posting at the beginning of a lecture (**route map**)
- ii) Review and summary of the topic at the end of the lecture
(**review map**)
- iii) As a revision and learning tool for examination preparation
(**revision map**)

I also encourage my students to construct their own mind maps as the lecture progresses which they then staple to the front of their lecture notes.

I always use 10 to 15 minutes of the first lecture with new students or a new module to introduce the concern of mind mapping or spider diagrams as some students like to refer to them. Many students are visualisers i.e. they like pictures, diagrams and videos instead of text. **I have also found this useful with dyslexic students.** When constructing a mind map I start with a central core concept in the middle of the paper (this could be the title of the lecture) around the central core I tend to place critical assumptions, if there are any (this could be in a list or just placed by the central core). I then build-up concentric circles of ideas, theory key journal articles and real world examples (both good and bad practice). Students tend to be very interested in how large multi-nationals often make huge mistakes in marketing (three examples – floor wax, German beer and cookers in Japan). I also recommend that students always put the date in the top right or left hand corner.

The great advantage of mind mapping is you don't need to think in a linear way and as ideas are presented you can easily link key ideas or topics together and due to the nature of the mind mapping you can jump from one area/idea to another. Furthermore they can show historical development and hierarchical structures (example Oliver's loyalty chain

Cognitive, Affective, Conative and Action). I have found students who actively use mind mapping tend to increase their average mark by a few percentage points, retain information for longer and can see the big picture.

Eight Step Method

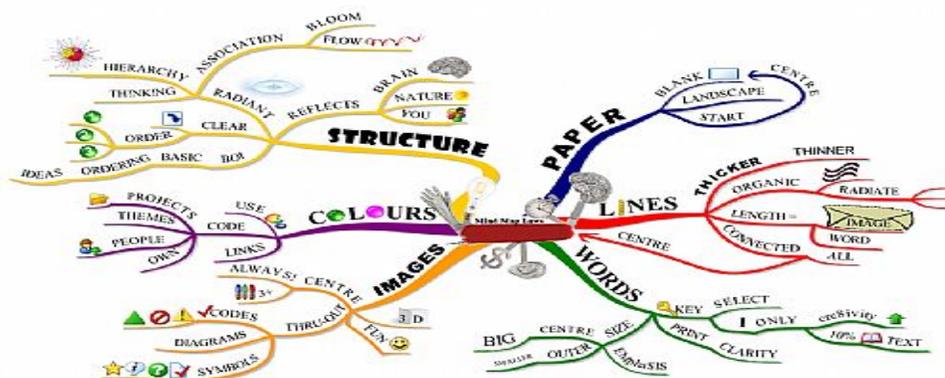
Eight step progress for mind mapping/brain storming – Exercise 1. I get students to do this for how would you go about write an essay in University, as a five minute exercise after I have introduced mind mapping to them. Along with the topic/subject in the centre the deadline date is also put to start time management skill.

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|---------|---|
| Step 1. | Start at the centre of the page with a key word/topic (landscape is best with A4). However you don't need to be limited by A4 sized paper, I have used wall paper before on a large dinning room table to do mind mapping and brain storming. |
| Step 2. | Think freely and let your ideas flow, even if your ideas seem strange or unconnected. |
| Step 3. | As ideas emerge print one or two word descriptions of the idea on lines (coloured curves are best) or branches and use arrows to connect ideas up. |
| Step 4. | Think as fast as possible. |
| Step 5 | There are no boundaries – think out-of-the-box and be as creative as possible (TRIZ) |
| Step 6. | Don't judge your ideas too fast even unrelated ideas may provide useful later (TRIZ) |
| Step 7. | Go, go, go - keep your hand moving across the page keep the ideas flowing, change colours, change pens. If ideas slow up start drawing empty boxes and let you mind fill the boxes in later. |
| Step 8. | Add in relationship/linkages and connections. |

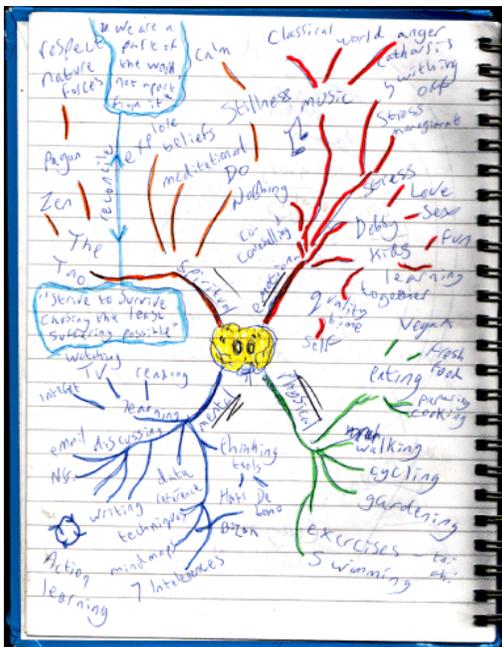
Remember if you need to re-draw the mind map this is easily achieved and is not a waste of time.

Four Examples

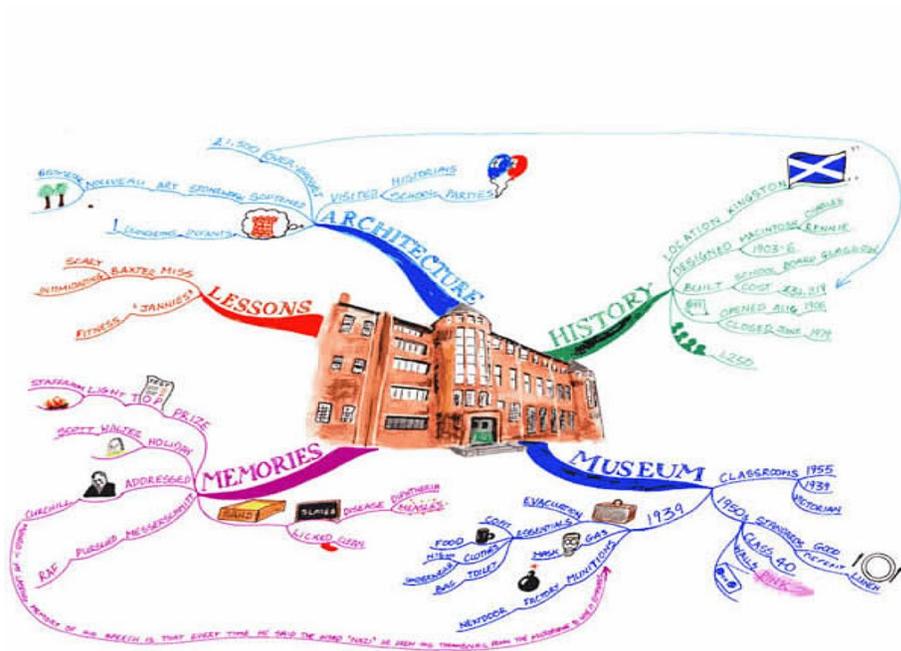
Example 1: How to construct a mind map



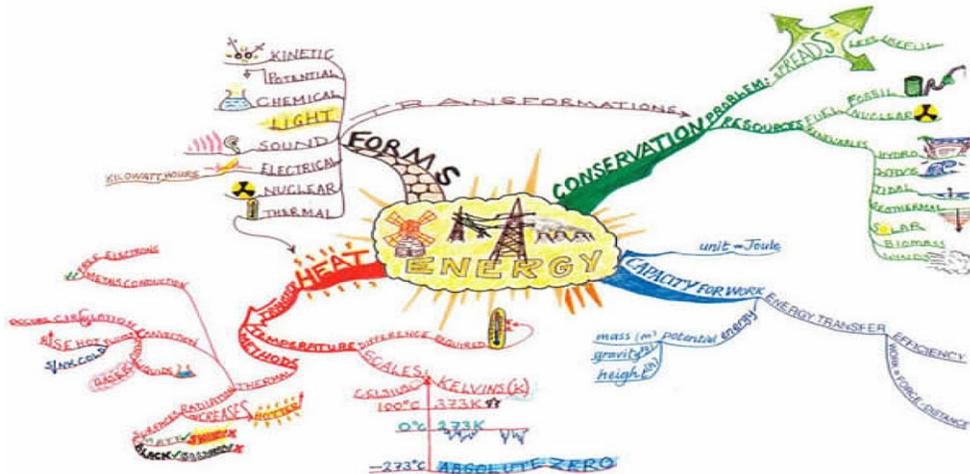
Example two: Mind mapping notes taken during a lecture on well being



Example three: A mind map about a museum



Example 4: Mind map about different forms of energy



Real World Example

One of my personal postgraduate tutees (I hadn't taught this student) from Jordan spoke to me the end of January 2007 after just failing all their Christmas MBA examination with marks in the range 40% to 45%, they were very down hearted and thought they should cut their loses and return home to Jordan.

I ask the student if they could spare a couple of hours and I sat down with them and explained mind mapping, the student started to get really excited and went away to practice the technique. Three days later the student knock on my door and showed me over 25 mind maps for each major topic they had studied in semester one, I ask if mind mapping had helped and they said yes.

I then ask the student to give me any one of the mind maps they had constructed and I ask them to reproduce it, they couldn't. I ask a couple of key questions and they constructed about half of it, I then try to encourage them more by stating they has made a **massive leap forward** but they still need to do more work (in some cases simplify the mind maps and other cases link different mind maps together). The student practiced really hard and passed all the resit examinations plus all the semester 2 examinations. Their average increased from 43% to 54% I then supervised their dissertation which they achieve a mark of 56% and the student left Swansea University with a smile, an MBA and confidence to start their new career. They were very grateful but it wasn't me that had done very much I just turned the key (mind mapping) and then stood back.

Conclusion and Summary

So I would strongly recommend mind mapping is more actively used, particularly with foreign postgraduate students (different language, different culture, often thousand of mile from home) and they may only be with the University for one year. Mind mapping may be one of the key which is the different between success and failure. I also highly recommend that dyslexic students learn how to use this technique.

Remember the '*difference between success and failure is wafer thin*' something that my postgraduate student from Jordan learnt very quickly.

Also see

Argument map
Cognitive Map
Concept map
Mind webs
Spider Diagram
Webbing
Webs