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Mindmapping Skills Training Course

About the author

Dr Margaret Greenhall was a senior university lecturer in chemistry for 7 years and helped teach the foundation study skills course. She then moved to staff development and worked at the University of Manchester, England in a university wide role - “supporting and implementing new ideas in teaching and learning.” In 2003 she left the university to start as a consultant helping people to learn easy to use techniques to help them become more creative, efficient and quicker at managing information. She now runs a small publishing company www.UoLearn.com specializing in book by trainers and teachers. She still runs workshops so please do email margaret@uolearn.com for more information.

“I find mindmapping fantastic for organizing my thoughts about complex problems. If I’m starting a new project I always begin by doing a sun diagram and brain dumping everything I know onto one sheet of paper. I then let the information incubate for a few days and then I get the sun diagram back out and rearrange the information. This way I can make new connections that I hadn’t thought of before.”

“Thanks again for this morning’s session - I found it really useful and productive and a chance to reflect on the way I work”

“I've always struggled to remember things for my exams. I had a go at mindmapping for my science exam and it was amazing - I could see the picture in my mind and remember the things by the colors and where they were on the page. I certainly think it helped me pass my exam.”

Books from www.UoLearn.com
What is mindmapping?

Mindmapping is a visual way of making connections between different parts of information. You start with a central idea and create branches coming out of the center.

Mindmaps can be used for:

- Planning
- Creativity
- Overviews of topics
- Memory (especially for exams)
- Taking notes in meetings or lectures
- Organizing complex data
An example mindmap that was used to plan a presentation on project management
Instructions for Mindmapping

If your topic is fairly simple and you already know a bit about how it is connected then the way to draw you mindmap would be:

1. Use the paper landscape style (A3/tabloid size is best).

2. Have colored pens ready. If you have them the best sort of pens are the multicolored packs of fineliners.

3. Choose a central theme and a picture, use at least 4 colors in the center.

4. Choose your main sub-themes, allocate each one a color and draw a branch for each one and make sure they visually connect into the central picture (you should think of it like a tree the branches need to connect to the trunk). If the map is intended to act as a memory aid (e.g. for an exam) then make the shapes of the branches different.

or

Pick the one topic that jumps out at you as the start and work on that branch first then the next.

It doesn’t matter which option you use.

5. It helps both memory and creative thinking to add small pictures associated with your topic.

6. Add in as many sub-levels as you need, if you run out of paper use sticky tape to add more.
(P.S. you don’t need to be able to draw - the central picture in this mindmap is supposed to be Mickey Mouse, as giant red wood, sunshine and surfing.)

Exercise 1: first mindmap

Make a mindmap about summer using the words below (they are just in a random order at the moment).

Start with a central picture, with 4 colors, add in at least 5 more words you associate with the ones given and put in at least 5 pictures as you make the mindmap. If you don’t have any large paper take two ordinary pieces from your printer and tape them together on the back.

ice cream, picnic, sun hat, barbecues, tent, clothes, sun, salad, ball, sun cream, swimming, food, paddling pool, bucket, holiday, t-shirt, spade, yellow, hot, sunglasses, ferry, beach, tennis, caravan, music, sand, cycling, sea, sport, paddling pool, sun hat, shorts, strawberries, fun
Here are some example ones other people have done for their very first mindmap:
Exercise 2: Something relevant to you

Now think of something that isn’t too complex, such as a to do list, a book you’ve read recently or a holiday you’re planning. Draw a mindmap of it.

A couple of examples:
Explanation of the principles of mindmapping

Mindmaps help memory and creative thinking in several ways.

Creativity and planning overviews:

**The connections** help your brain to draw out information that you wouldn’t immediately remember and access usually. The creative side of this is that everyone will pull out different information based on their own connections and thus view the information in new and creative ways. In my training sessions I’ve asked the whole group to list 10 words associated with yellow and write them on separate post-its. Now you’d think from a simple starting point like this most people would come up with similar words such as sun or daffodil, however on a table of 5 people giving 50 ideas the average number of unique ideas, that none of the other people came up with, is about 38 which is 76%. When I’ve widened the comparison of ideas to include the whole group of say 16 people than about 55% of the ideas are unique.

**The pictures** help ask a different part of your brain to work on the problem. Most people are familiar with the idea of left and right brained thinking. Left brain thinking is associated with logic, language, number and analysis. Whereas, right brained thinking is associated with color, images and rhythm. Now modern research shows these activities don’t take place exclusively on one side of the brain or the other but they definitely do involve activating different parts of the brain. So by deliberately asking your mind to find a picture to represent even the most abstract of ideas you’re accessing the information in a completely different way which can lead to fantastic insights.
The color helps you to again access different parts of the brain than just using black or blue ink. It also help your mind to say yes there is a strong association between the ideas on this branch. The other interesting thing about is is that just having colored pens and large pieces of paper helps you connect to a time in your life when you perhaps had less fixed views and more of a sense of wonderment. One lady said to me at the end of a session that it was the most creative she'd felt since she was 12 years old.

The branches help with creativity as people tend to go from a very abstract idea in the center of their maps to more concrete ideas at the tips of the branches. The structure is very similar to an organization diagram, family tree or biological diagram of related species. A concrete idea is one which you can think of with your senses. For example the word mammal can be defined but is it difficult to think of it with your senses. Whereas the word goat can be thought of in terms of a picture, a sense of touch (especially is one has ever butted you) and possibly even a smell.

The big picture and small details are both on one sheet of paper. For planning projects, reports and presentations it is important for people to be able to step back and see the big picture but also to be able to ensure that all of the detail gets covered. Mindmaps are one of the few ways that both can be seen on a single piece of paper as an overview.

4 colors are needed in the center so that any one branch doesn’t have very high importance by completely matching the center, also by making yourself draw at least one central picture you are again engaging the right side brain attributes.

Drawbacks: Whilst mindmaps are fantastic for helping you to organize data and work with it in a more creative way they are very individual as the connections you make are unique and if you’re sharing the information with other people you may need to convert it into a more text based version.
Memory, presentations and revision:

**Overview and detail** - mindmaps help with revision because they give a simple overview on one piece of paper. This means you don’t have lots of pieces of paper piling up whilst you revise. They also however give an opportunity for detail to be included so you can put very precise facts into them.

**Connections** - one of the best ways of helping you to remember something is to have it connected to data that is already in your mind. Mindmaps help you make choices about which information connects together so you have something else to associate it with.

**Color** - one of the difficulties with remembering information for exams or presentations is that it is often visually very similar, e.g. lots of lists of information in the same color so you are relying on the content itself to make strong connections whereas by choosing a color you have another anchor for the memory. You can think, well I know I picked up the pink pen, what was that branch about?

**Pictures** - are also great to help connect the information to something else you already have stored, by asking yourself what shall I draw you are really paying attention to the detail. The other effect is that in a presentation or exam you can access the information visually rather than via language so you give yourself another option in that high stress situation.

**Spatial awareness** - often when you’ve draw a mindmap you retain a good memory of the shape and position of the information. So you can see a picture in your mind of what the map should look like. This helps with one of the biggest problems in exams or presentation which is remembering something you’ve forgotten you’ve forgotten. E.g. in an essay question you get very little information in the question itself to prompt connections so often people can complete an essay and not even be looking for the information they have missed. Whereas if you’re remembering the shape of your mindmap you’ll know that there is something missing and can ask your brain to find it.

**Motion** - another way of accessing the information is the kinesthetic motion your hand and body made as you drew the mindmap and pictures. Each different way you can access the information gives you a stronger chance of remembering it. An example is that some people remember phone numbers by the place they put their fingers. So in an exam you can quickly redraw the mindmap and the physical memory as well as the visual one will help you.
7 items - Most people can store 7 items in their working memory. Now when you are writing traditional lists for your notes you often end up with groups that are bigger than this, making it difficult for your mind to connect them together. In fact what you need to work with is no more than 4 items at once because that then gives you 3 more spaces in your mind to connect the information to the rest of your stored data. Mindmaps help greatly with this as you'll find due to space and the way things connect you usually end up with only 3 or 4 items at the tips of the branches.

Uniqueness - Many people's traditional style notes look the same for every topic. If you vary where you put the colored branches, start with a unique picture in the center, pictures on the branches and fit the length of each line to the words the shape and color of each mindmap will be completely different. This is an important aspect of making something memorable. Try remembering what you had for dinner three weeks ago last Tuesday - you can't because it's too similar to all the other days in between. By making each map visually and spatially different you make them more interesting and more individual so you are can access them much quicker.

Drawbacks - many of the reasons why mindmaps help rely on vision and spatial awareness being strong learning factors, however if you are strongly reliant on sound you might be better with a different technique such as talking to other people or listening to tapes. If you'd like to find out your strengths there is a free questionnaire available at www.vark-learn.com

Timing for revision - mindmaps help greatly but you also need to space out your revision and keep returning to the same information several times. During sleep your mind lays down temporary pathways and if reinforced the next day your mind says hey these are important let's keep them long term.

Day 1: Look at the information for 2 seconds per page. This is almost like you're a camera and you are pausing to photograph a page.

Day 2: Look at the information for 2 seconds per page. Then read it. Empty your brain onto a sun diagram (see next pages).

Day 3: Look at the information for 2 seconds per page. Then draw a mindmap.

Next week: Look through the information again and redraw your mindmap (don't just look at it, actually redraw it). Simplifying and reducing the information to the minimum you would need to be able to reproduce it.

3rd week: Same as previous week, but redraw the map from memory, then compare it to your previous one.

Week before exam: 2 sec per page over material, redraw mindmap.

Day before exam: 2 sec per page over material, redraw mindmap.
Sun diagrams or brain writing

If you have a more complex subject such as a big revision topic, a project your planning, a major report or a presentation you're going to give then you need to use a two stage process.

Many people when they are planning try to do everything as a one stage process - they write a series of lists about the topic or go straight to a mindmap. The trouble is that you are not allowing a proper creative flow as you are both asking your mind what the information is and how to categorize it. For complex information the first step should be a brain dump of what the information is, then followed by organizing it. This allow you to freely associate the content and then to make connections afterwards.

You should also leave a bit of incubation time between the two steps - preferably overnight or within a few days.

Brain writing is a bit like a brain storm that you might do as a team but on your own. There are several techniques you can use but all involve the following basic principles:

1. Any idea relating to the topic is written down (no censorship and dismissing of ideas at this stage).
2. The ideas can be any level of importance so it can be a big idea or a small piece of detail.
3. No organization of the data can take place in this stage.
4. There should be a gap in time between getting the data out of your brain and organizing it. Preferably overnight but if that is not possible then at least take a break where you walk around.

Technique 1: Take a blank pile of post-its or small cards and write one idea per card.

Variations: Have a pile about the double the size of the number of ideas you initially think there might be and fill them all.

or Before you start count out piles of about 10 cards and every time you finish a set start another pile but if you start one you have to finish the whole stack of 10.

In either case the fact that you have blank pieces of paper waiting to be filled will tell your mind to keep hunting for more ideas.

The next day you can either make a mindmap, organize the cards on your table, organize them onto a wall or just use ordinary lists to group the ideas together.
**Technique 2: Sun diagrams**

Sun diagrams are a fantastic way of brain writing because all the ideas end up on a single piece of paper. You start the same way as a mindmap which a main theme and a picture, this time however, circle the center and then draw simple lines radiating from the center just like a kid’s picture of the sun.

Fill in any ideas you associate with the topic, writing along the lines (if you write at the ends it will be very difficult to read it). Then when you’ve used all the lines add another full set all the way round. Again fill all these lines and add another complete set in between them.

When you’ve finished it may not look pretty but it is amazing how much this activity accesses the depths of the connections in your mind to draw out all the information on a topic.

Now the reason you do it in stages is that you get a nice run of ideas that flow well, then as you go round again you are still flowing with ideas and they are now getting connected on paper with other things that may not have been natural connections. Thus, when you come to organize the data the next day you will see new and creative connections within the data that spark understanding and creativity.

You draw a complete set of lines each time because the blank line is like an unanswered question, your mind hunts for that little bit of extra information to complete the task of filling in every blank line.
Exercise 3: Draw a sun diagram

Take a complex topic that you need to think about, this could be a presentation, a report, reorganization, a project, a study topic etc. Draw a sun diagram and keep going until you have scooped all of the data out of your brain and onto the page. It doesn't take long, 10 minutes is often enough even for very complex ideas as your mind will flow so fast that the ideas just seem to arrive on their own. Remember to do a complete set of blank lines each time you finish a set, you'll lose the flowing nature off this technique if you don’t have the waiting blank lines.

Example sun diagrams:
Exercise 4: Big mindmap

After at least one day come back to your sun diagram and draw a mindmap of the information. Now you can make connections and put things into a hierarchy, you can also start to evaluate what you put down by discarding some of it and adding extra bits in. Make sure now you’re using colored pens and adding in some pictures.

Example: mindmap from the last sun diagram

Exercise 5: pictures only

If you really want to explore creative mindmapping then have a go at doing a mindmap using pictures only. Below is part of a mindmap on memory too but only pictures are used.
Mindmapping software

There is quite a bit of software for mindmapping. A lot of it is very good but they do have learning curves and some do cost money. Personally I prefer to work on paper because the main strength of mindmaps is the quick flow of thought and getting away from your normal working environment. An advantage of mindmapping on the computer is that you can add notes to the branches and also then quickly convert them into reports and share the information with other team members.

The is a good overview of software reviews on mindmapping at http://mindmappingsoftwareblog.com

Freemind is open source free software that is Java based and will run on either Macs or PCs
http://freemind.sourceforge.net/wiki/index.php/Main_Page

Mind genius is aimed more at a business market. There is a 30 day free trial and then a business license is $235 and an educational one is $91
http://www.mindgenius.com/

Inspiration is used by many colleges and universities for students. It has a 30 day trial but then costs $99 for an individual license.
http://www.inspiration.com/Inspiration

iMindmap has been developed by the Tony Buzan who has developed and promoted mindmaps. Again it has free trial and costs $99 for the basic package.
www.imindmap.com

Edraw is a free package that is part of a larger suite of commercial software.
http://www.edrawsoft.com/freemind.php

*Prices from 2009
**Books**

The Mind Map Book, Tony Buzan and Barry Buzan,  
BBC Active, 978-1406612790, £8 or Plume, 978-0452273221, $16.50  
This is an excellent book by the main inventor of mindmaps, Tony Buzan. The color plates show beautiful examples of mindmaps from a range of people. It is the main book I'd recommend for mindmapping.

Mapwise, Oliver Caviglioli and Ian Harris,  
Network continuum education, 978-1855390591 $31/£16.50  
A book on visual mapping with an emphasis on how to use it in the classroom.

Mind Maps for Kids, Tony Buzan  
Thorsons, 978-0007151332, £9.70 or 978-0007197767 $20.70  
A lovely color book with simple instructions - I'd recommend it for any age not just kids.

Mapping Inner Space, Nancy Margulies and Nusa Maal  
Corwin Press, 978-1569761380, £13.50/$20  
This book will give you the next step from mindmapping. It covers a much wider range of visual note taking and creative use of color to present information.