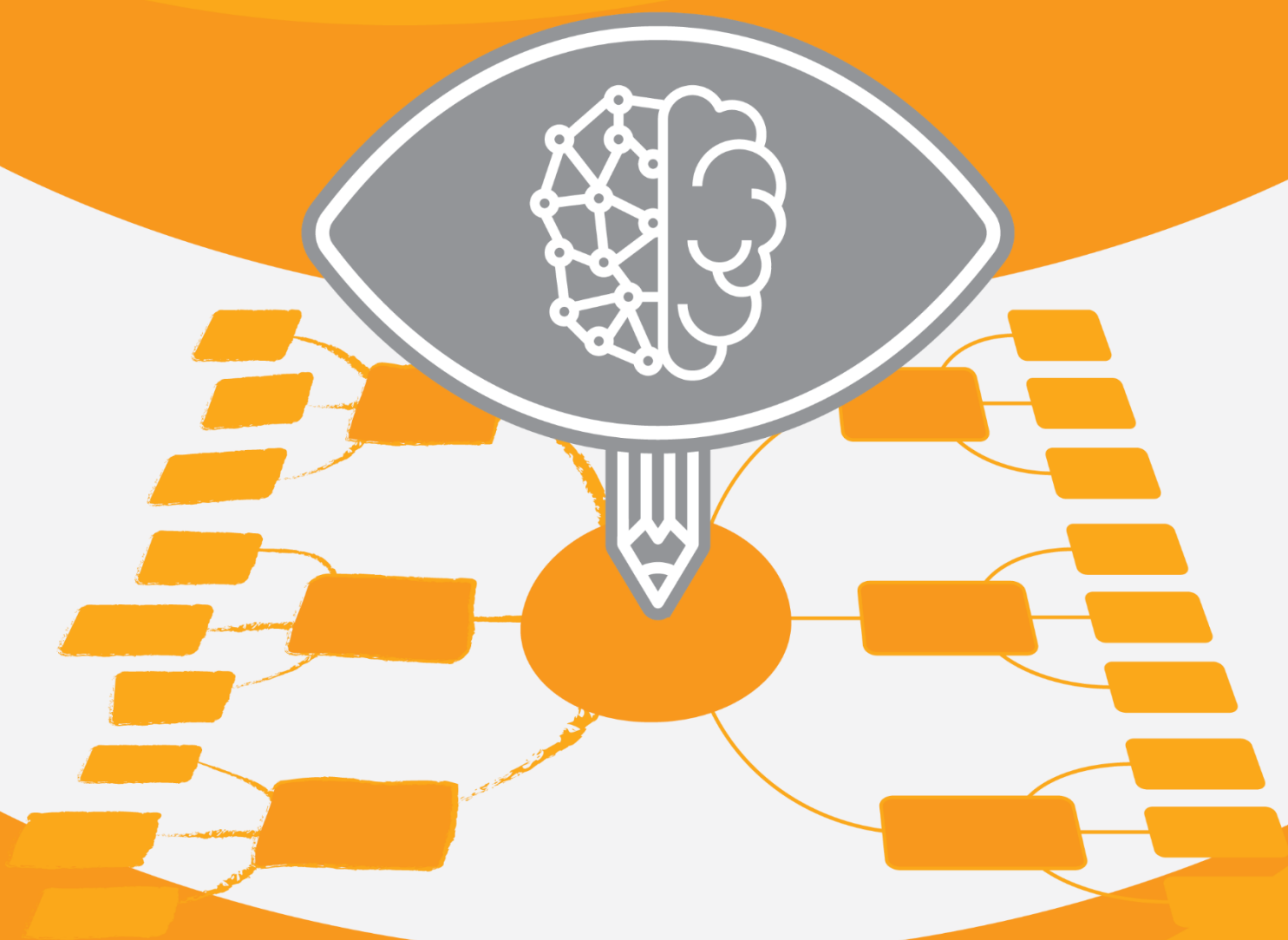


Taking notes with **mind mapping**



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INTRODUCTION

Visuals are becoming more and more prominent today. In 2014, the Open University published a Report on Innovation Pedagogy (M. SHARPLES and al. 2014)

- A reflexive journal (a document to record the progress of your learning)
- Mind mapping

Indeed, mind mapping and visual learning enable to:

- ☑ connect ideas
- ☑ get the big picture and zoom on details
- ☑ memorize
- ☑ present information
- ☑ take notes

Taking notes is at the heart of a student's job. Indeed, as a student, you start taking notes from the very beginning of your course. You also take notes about written sources when reading texts, making summaries, doing research work.

Taking notes is a complex process which happens in a fraction of a second. You first perceive the sound, the voice of the teacher. You should consider: Can I hear well in this part of the class? Is there any background noise? Some chatting? Is your smartphone or Facebook on your computer catching all your attention? As a second step, you need to make sense of what you hear, or in other words, switch on the understanding process (which does not always happen right on the spot). Only then will you decide on what to write down. Finally, you will proceed with note-taking.

However, by fear of missing something, some students often take extensive notes, writing down each single word they hear. Maybe some abbreviations or other techniques are used to save time. Yet, quite often, notes remain indigestible. In addition, note-taking usually happens in a linear way. Line after line, page after page. In the end, it is difficult to keep a global view and to link items together.

An excellent tool to remedy this is tree-like note-taking or mind mapping. As you only write key-words, it will help you deal with the speed of speech. Indeed, we speak a lot faster than we write. In addition, by taking notes with a mind map, you work on the big picture and the detailed view at the same time, which helps better understanding and memorizing. So ready for a more effective and successful learning?

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DISCOVER MIND MAPPING



Mind mapping was developed in the 1970s by an English psychologist named Tony Buzan. The pattern of a mind map has its roots in similar forms derived from medieval thinking. The temperance map, for instance, dating from the 16th century, displayed words around a center (Delengaigne, 2016).

1.1 Study with mind mapping

Tony Buzan started developing mind mapping when he was a student. An anecdote in his biography (Keene, 2013) tells how he wanted to learn more about his brain in order to better use it for optimal learning results. He went to the library and asked for a book on this subject. The documentalist directed him to the anatomy section. He did not find what he really wanted: a book on how to use his brain more efficiently. Thereafter, his battle horse became mental literacy. That is how Tony Buzan developed a tool compatible with the physiological functioning of the human brain.

In its beginnings, mind mapping was used mainly in the world of education, especially to help children struggling with school work. In the 1970s, Tony Buzan conducted an educational experiment. He helped young people with academic difficulties to

successfully complete their degree through innovative teaching methods such as mind mapping. This experience was filmed by the BBC (Buzan T., 2004).

► What is the difference between a list and mind mapping?

A list represents a closed series of items or closed thoughts. It is used for classifying a sequence of finite elements, for example a shopping list. A mind map displays open thoughts and is used to explore a subject in a tree-like shape. These branches open up to further items or ideas.

1.1.1 Adopt mind mapping as a tool to study

Tony Buzan presents mind mapping as the Swiss Army knife of intelligence. As part of your studies, mind mapping will help you to:

○ **Generate ideas**

Mind mapping is a tool to develop your creativity and to brainstorm. Imagine you want to give a workshop on mind mapping but do not know where to start. You can begin with a brainstorming map. At the center of your map, you indicate the topic under discussion: mind mapping training. Then, you start generating ideas and displaying them around the center.

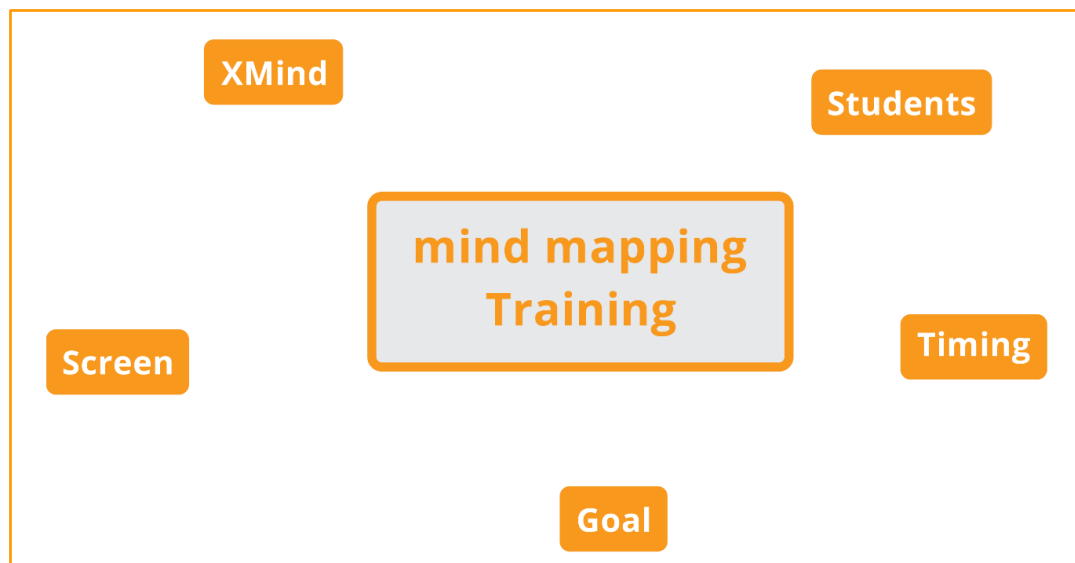


Fig: Draw a brainstorming map to generate ideas.

As you proceed, you can group your ideas into clusters. This will enable you to define categories and generate new ideas.

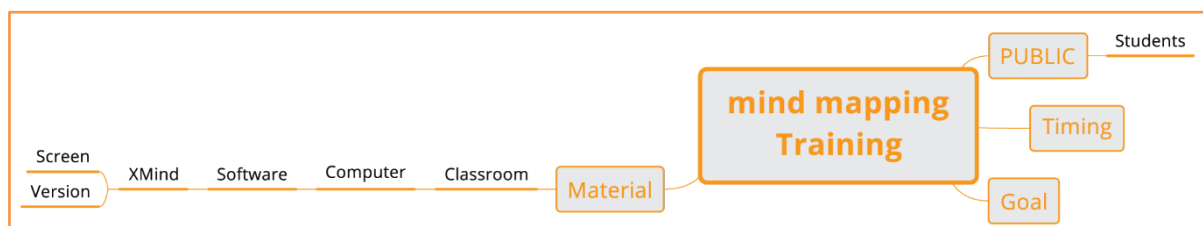


Fig: Group ideas into clusters.

To enhance creativity, you can also work the other way around, by opening unexpected paths for thought. Instead of starting at the center of the map, why not, start from the periphery and go back to the center? By changing the usual way of proceeding, new ideas will emerge. The map below expands upwards from the tip of the branch back to the center. Starting from XMind (a mind-mapping software), you think of computer, which makes you think of classroom and then of material.

○ **Take notes**

You can take notes from a written or an oral source. Taking notes while reading and analyzing a text or at a conference or while attending a lesson.

○ **Write**

You can write a variety of texts or essays using mind mapping. Mind mapping will be particularly useful for writing lengthy pieces of writing such as an internship report, a dissertation or even an entire PhD thesis.

When you choose mind mapping to write a text, make sure the software you use can export in text word/text format (XMind, FreeMind).

A mind mapping software named Docear is especially designed for research. It is a software that couples the mind mapping software FreeMind with Zotero, a software to manage reference search.

○ **Writer's block**

Mind mapping can help relieve those suffering from writer's block. Start by brainstorming on your topic. Organize the ideas produced at that stage and come up with a plan. Then, enrich your plan with other ideas. You should start by developing those ideas in the form of short paragraphs. Place them on sub-branches, so as to see your whole text at once. Move these paragraphs around to rearrange your text. Once your map is finalized, export it in a word processor.

○ **Speak in public**

Mind mapping is also a tool which contributes to acquiring better speaking skills.

Indeed, quite often when you speak, you stay too close to your notes. In the worst case, you literally read your text. At best, you glance at your notes. With mind mapping, you will not go through this process as there are no complete sentences but only keywords to read. Moreover, the images in your map will clearly signpost the course of your presentation. The process of elaborating and building your map will contribute to better memorize and internalize your presentation.

○ **Manage a project**

The benefit of mind mapping in project management is that it makes it easy to split a project into tasks and sub-tasks. It is mostly relevant at the start phase of the project. Then, for the follow-up of a project, Gantt charts are often used, as they help displaying the evolution of a task in time, and in interaction with other tasks.

1.1.2 Take the best out of mind mapping?

Mind mapping is not only a valuable tool to use throughout your studies. It is also a tool that can bring a positive contribution to your professional life. A lifelong tool, in a way.

The benefits you will gain from mind-mapping are the following:

- **Making the big picture visible**

Courses often contain plenty of details. You will probably get lost at some point. Mind-mapping will enable you to prioritize information and organize it. You will, at the same time, get the big picture (on the main branches) and have immediate access to the details (on the sub-branches).

- **Connecting ideas**

Quite often, classes are organized in a silo system, i.e. piling up information without necessarily connecting the ideas seen in economics with those seen in law, for instance. Mind mapping fosters this ability to make links. Furthermore, in a text, ideas are often presented separately. Mind mapping will allow you to connect ideas within a text. Indeed, connections are easier to make between concepts expressed by a single word, rather than a series of words or sentences.

- **Developing your creativity**

Education does not always foster the creativity of students. Yet, it is essential both for your studies as well as in a professional context.

- **Separating the wheat from the chaff**

In a text, the main ideas are drowned in many details. Mind mapping will make it possible to make these ideas stand out.

- **Giving a more personal touch and a more personal structure to your notes**

Making a mind map requires a personal way of processing information. This makes mind-maps easier to memorize by elaborating your own information architecture. For instance, the plan and the structure of a text correspond to the thoughts of the author. However, to memorize and to process information, it is needed to classify it in a more personal way, and each person structures information differently.

The illustration below shows how main ideas emerge and connect. Key ideas, keywords and key sentences are highlighted. Lines draw the link between ideas. This could be the starting point of a mind-map. This process could be applied to any text in any language.



3) Pictograms

They are used to illustrate your ideas. When you take notes in relation to a text, they will help to establish an interaction between you and what the author wrote.

4) Colors

Colors highlight information and can also group elements visually. For instance, you can draw a green or yellow branch. They also stimulate memorizing.

5) The center

A mind map has one and only one center, which is the core idea and the core of your thinking process. Its central position is essential. Indeed, for human beings, vision is better at the center than at the periphery. Thus, you will stay focused on the topic and avoid going off-track.

The center is also important for students with a Dys/disorder (Dyslexics, Dyspraxics etc.). Indeed, these students suffer from a poorer short-term memory. Keeping the theme at the center will prevent forgetting too quickly.

6) Clouds

Clouds or frames make it possible to group the information visually. They are also used to create clusters and group information together.

7) Branches

Branches start from the core and spread all around it. Main branches and sub branches help to set a structure and prioritize information.

8) Links

A line or arrow can help connecting ideas located at different places on the map.

1.2.2 Follow this simple recipe

Let's practice and create a mind-map by following this simple recipe:

1. **Start in the center:** write down the theme of the map. Add an image.
2. **Generate ideas:** launch a brainstorming. Do not censor the ideas that pop into your head. Write them down.
3. **Reorganize your map:** move some branches, delete others.
If you made a hand-drawn map, it will be more difficult to move branches around or delete them
4. **Let it rest** and review your map later.

To follow this recipe, you will be faced with a choice: should I opt for pen and paper or for a mapping software? There is no bad choice, it simply has to match your needs and intentions. To help you choose, ask yourself whether the map will be drawn for yourself or will it be shared? What will be easier to understand for others? Besides, a paper map is more personal and gives you more freedom for pictograms and layout, but it is less flexible to add branches. If the action of writing helps you learn and memorize better than typing,

opt for a paper map. If you feel more comfortable with a very clearly structured document, go for a software. You will also notice that some softwares have designs similar to handwriting, making maps more personal.

Setting yourself limits... to identify the essential

To take advantage of mind mapping, you must learn to limit yourself. Two laws can guide you:

- **The Douglas Act:** The more space you have, the more you take up. Mind-mapping follows a tree-like structure and you could keep adding branches. Yet, your map could quickly become overloaded with information and be difficult to read. You can voluntarily limit the available space to make your map. For example, you can limit yourself to an A4 or A3 page to summarize a text of several pages. This will force you to focus on the relevant ideas as a priority.
- **Parkinson's Law:** The longer you have, the more time you will take. Making a mind map is akin to surfing the internet. You can spend hours and hours there. To avoid this pitfall, you must limit the time to make your map.

1.2.3 Choose your mind mapping software

There are plenty of mind-mapping softwares on the market. The choice will depend on several parameters:

- Your **needs**. What will be the purpose of your use? For brainstorming, most mind mapping softwares will do. If you want to write a full text, you must choose a software that can export to a word processor.
- Your **operating system** (Windows? Macintosh? Linux?). Some mind mapping softwares (such as Mindomo or MindMeister) are online services that do not require to be installed on your computer and do not depend on the operating system you use.
- Your **budget**. For tighter budgets, some mind mapping softwares are free. Others offer discounted licenses for students and academics.
- The **community** around the software. The broader and more active the community around it, the more you can exchange maps or even find help when needed.

For a good start we advise using XMind. It is a Freemium licensed software. The basic version is free, the advanced features are part of a pay version. Below you will find a list of useful mind-mapping softwares. Check which one matches your criteria best.

SOFTWARE	<i>Taking notes</i>	<i>Writing</i>	<i>Managing a project</i>	<i>Making a presentation</i>	<i>Collaborating</i>
FreePlane / FreeMind	•	•	•		
XMind	•	•	•	•	•
MindManager	•	•	•	•	•
Ayoha	•	•		•	•
MindView	•	•	•	•	•

1.3 Memorize your notes

1.3.1 Discover how your memory works

We do not have one single memory, but several types which cooperate in the process of memorization. They can be classified in a time scale as follows:

- Sensory memory (a few milliseconds): we have a different type of memory for each sense (e.g. iconic memory for the sight, etc.).
- Short-term memory (less than a minute): It represents the short-term capacity of the brain. The work of the psychologist Miller showed that short-term memory could store 7 items in average. This may actually vary from 5 to 9 items (so $7 + 2$ or $7 - 2$) depending on the individual. You use this short-term memory when you recall the information you just heard from the teacher as you are taking notes.
- Long-term memory (from several minutes to several years): It also consists of several modules. In the context of your studies, two aspects will be particularly important: semantic memory and episodic memory.
 - Semantic memory, on the one hand, focuses on facts, meaning, concepts and knowledge from the external world. It enables to remember generic and context-free information and is not related to our own experience. It is abstract and involves verbal signals.
 - On the other hand, episodic memory, based on our own experience, sets events (from your personal experience) in a serial form. Time, places, are associated with emotions and specific contexts.
 - The semantic memory derives from the episodic memory, as we learn facts or concepts from our experiences.