



Photographer: Jan-Olof Yxell

# Study Techniques

## Preface

To determine which study technique suits you best, you may need to try out different methods. In this booklet, you'll find some examples of techniques that many students have successfully experimented with. Much of the content is drawn from Björn Liljeqvist's book "Study Smart and Learn More," as well as from the book "Learn for Your Future - Succeeding in Your University Studies" by Chronholm-Andersson.

The study techniques in this booklet are divided into the categories of "before," "during," and "after." It addresses how you prepare for your studies, how you actively engage as a student during ongoing studies, and how you absorb and remember your new knowledge after completing your studies. For simplicity, we have chosen to categorize the study techniques where we believe they fit best. However, there may not always be clear boundaries when the exercises can be applied. Sometimes, an exercise categorized under "during," for example, may also be possible after the studies. It's beneficial for you to be aware of this.

When selecting which study techniques you want to learn and apply, consider not incorporating too many techniques at once. It takes time to adopt new habits, and there's a risk of losing interest and energy if you take on too much initially. Try one study technique at a time. Once you've established the habit, you can add another. Take it step by step, one thing at a time. Keep in mind that a new study technique needs time to be learned.

After trying a study technique, feel free to conduct a simple evaluation. How well did the study technique suit you? Can it be adjusted to work better for you? If you choose to discard it, what is the reason? Does it not match your personality? Do you lack understanding of the subject? Have you not been active enough? Is there any other reason for choosing to discard it?

Good study habits will help you succeed in your studies.

Best of luck!

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# Study Techniques before

## - Preperation for studies

By gaining an overview of the course content, it becomes easier for you to keep up from the very beginning of a new course. Under the "before" category, you'll find study techniques that help you keep track of your studies. One approach is to plan, effectively utilizing your time for efficient learning. By using the exercises, you can establish an external structure in your studies. Many study techniques revolve around preparing for lectures, but remember to prepare for exercises and laboratory exercises as well. It doesn't have to take much time, but it yields significant benefits. Some of the techniques also assist you in dealing with the challenges of sitting down to study or when motivation is lacking.

### 1. Get an overview

Take a piece of paper and write down 7 study weeks. Look at the course syllabus and note what will be covered in the course week by week. You'll gain an overview of the course. Consider what you already know about the topics that will be covered.

### 2. The Course Literature

Look at the course literature. Go through the table of contents and see what the book is about. Also, reflect on what you already know about the topics covered.

### 3. Planning

It's important to plan your studies to know when and what to do. See "Keep track of when and how you study" at the end of the booklet.

### 4. Find the benefit and joy of studying the course

Talk to older students who have already taken the course:

What do you learn in the course? What was fun about it? What practical use does the content have in upcoming courses?

### 5. Warm-up

Direct your thoughts to what needs to be done. Picture how you initiate your study session. You take a seat, gather what you need, and get started. This generates positive energy for the task at hand. By visualizing what you are about to do, you prepare your mind/body for it.



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### 6. Focus

Think of a situation when you were completely focused. Entirely absorbed in something. It should be a personal experience. How did you manage to become so focused? How did it feel? What thoughts were running through your mind? Hold on to that feeling and evoke it when you need to be entirely focused.

### 7. When it is difficult to study

In times of reluctance to study, close your eyes for a few minutes. Experience within yourself how satisfying it is when it's done. Envision your long-term goal to motivate yourself. What is it like when you reach the goal? What are you doing, what kind of person are you, and what does your day look like? Motivating yourself toward something enjoyable encourages us to strive to reach that point.

### 8. Long-term goals

Take a piece of paper and fold it in half. Write down a few words that describe you right now, such as a student, unemployed, partner, interested in mathematics, on the upper half. Use words that depict who you are, not how you are (i.e., not happy, lively, thoughtful). Now, imagine that five years have passed. What words would you like to describe yourself with then? Write down these words on the lower half of the paper. Do the words differ? If so, what is the difference? Can you, based on these words, identify goals you want to achieve in five years? How will you reach them?

### 9. Other goals

Try to formulate goals for different time periods.

- Which goal or goals do you have for today?
- For this week?
- For the course you study now?
- For this semester?
- For this year?

# Studietechniques during

To get the most out of your learning, it's important to be active. If you actively participate in the teaching, you'll absorb the knowledge being imparted more quickly. This could involve taking responsibility during a laboratory session, how you engage during a lecture, or during self-study. Dare to ask questions when you don't understand and be engaged in the instruction. Take notes during the lecture. The format of your notes can vary, and you should experiment to find what suits you best. Notes serve two functions: they keep you active during the session, and they serve as a basis for review afterward. Below, you'll find suggestions for various note-taking techniques. Here, you can also learn how to approach your course literature, how to read it, and remember it effectively. Being active means being focused and present. Just sitting through the time is a waste of your time and does not benefit your learning.

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## How to be active during a lecture

### Listen actively

During a lecture: listen actively. If you're not mentally present, there's no point in attending. Don't dwell on what you don't understand; continue to listen (see point 6 Ask questions). Attending the lecture and actively listening are also prerequisites for taking good notes.

Different techniques for note-taking  
It's often valuable to use various note-taking techniques. Sometimes it might be more appropriate to use linear notes, where you write things in rows beneath each other. On other occasions, it might be better to use mind maps, where different ideas, concepts, and contexts can be structured. The more techniques you master, the greater the chance that you can choose a technique that fits well in a particular situation.

### How to take notes during a lecture

Below are some tips that can help you get the most out of your lecture notes. Keep in mind that it's not only important to take good notes but also to use your notes for review during the course.

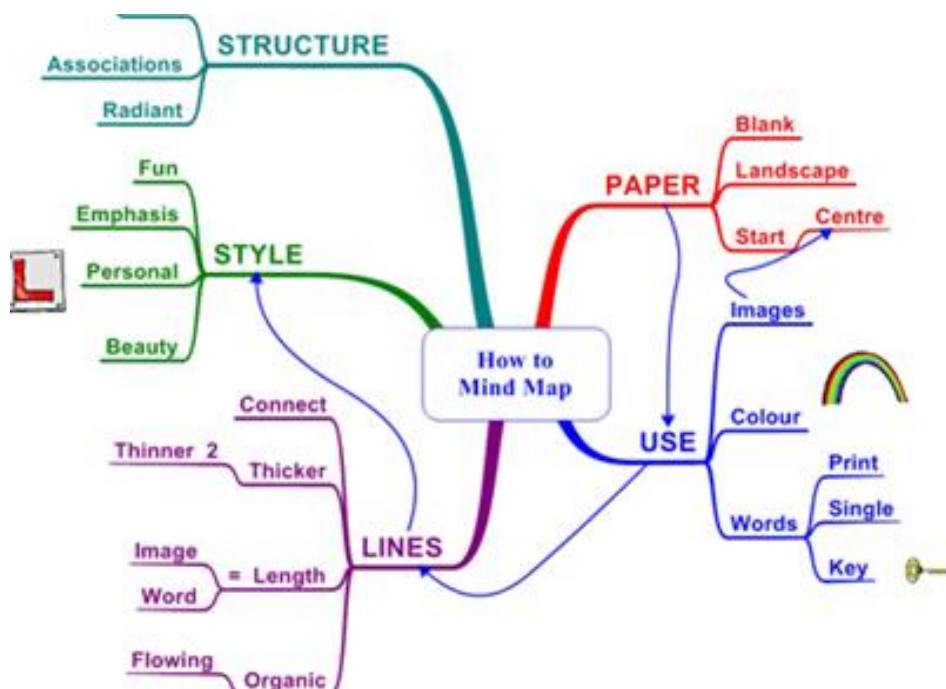
- Date your notes and set a heading for each session. This way, you'll find it easier to navigate your notes if you need to go back and look for a specific section later.
- Have a separate notebook for each course so that you can easily identify what you did last
- Have a plan for your note-taking. If you know why you are taking notes, you can more easily choose what to note down.

- Use large notebooks instead of small booklets so that you don't have to switch pages in the middle of problem-solving or when your teacher draws a picture on the board.
- Use notebooks without lines and grids. This way, you can write as large or as small as you want.
- Take notes only on the right side of a notebook. This way, you have the left side free to clarify things or add notes later when reviewing your notes.
- Use colored pens; for example, always write headings in one color, problem-solving in another, and so on. If you use different colors, you can more easily navigate through your notes later.
- Feel free to draw pictures in your notes.
- Take notes in the form of "mind maps." Feel free to lay the notebook down to have more space.

## 1. Mindmapping

Gain a clear understanding of a subject in a creative way. Use images, colors, and different shapes. Take a blank piece of paper. Choose a theme that interests you. Draw a picture in the middle - this is your starting point, your theme. Then create a mind map. Spend about 10 minutes on this.

Theme suggestions: "Me in ten years", "Java", "Universe", "Single-variable analysis", "My family", "Study techniques".



Photographer: Peter Widing

## Continuation of the mind map exercise

Take a new piece of paper. Linearize your mind map by turning each branch into a topic and each twig on the branch into a subtopic. Bullet-point these on the paper to create an outline. Look at your outline: could you write a text based on it? Try doing that.

## **2. Practice your reading technique**

Think about how you usually approach reading a text. Don't think about how you should do it but how you currently do.

- Are you satisfied with your current way of reading? Would you like to change something? Is there something you would like to improve?
- Read an article or a section from a fictional book. Set a timer and time how long it takes to read it. Count the number of words and calculate your reading speed. Repeat the experiment with a new text, but this time try to increase your reading speed.
- When reading, it's important to take regular breaks. The brain can't sustain concentrated work for too long. Set a time for reading (between 5-20 minutes at a time) and try to work as focused as possible during that time. Take a short break and then continue.

## **3. Switch between speed reading and deep reading**

Om du först snabbblaser en text och sedan djupläser den kommer hjärnan att känna igen saker från snabbbläsningen. Det gör det lättare att förstå sammanhang och koppla ihop information från olika delar med varandra.

## **4. Marginal markings**

Other ways to get more out of your reading can be to make marginal markings at particularly important passages (this is much faster than underlining in the text and is as effective as a highlighting method). You can also take notes on a pad beside the text.

## **5. Summarize**

Summarize what you are learning all the time. After reading a few pages in a book, try closing the book and creating a summary. This way, you'll notice if you have understood the context.

## **6. Ask questions**

Don't be afraid to ask questions. If you can't ask questions during the lecture/exercise, write them down to follow up on the answers later. For example, if you hear something in the lecture that you need to know more about to grasp, or if it's a concept that would be beneficial to understand better for the upcoming lab. What questions arise when you read your course literature? Note the questions as you read to later find out more. How can you address the questions? This technique is useful in many different contexts, both during and after a study session.

## **Personal suggestions and notes**



# Study techniques after

An important aspect that is often overlooked is working with memory. After a lecture or upon completing a course, it is crucial that you remember what you have learned. There are many different memory techniques, and under the category "after," we provide suggestions for some of the techniques you can use. One of the most essential prerequisites for remembering the content of the course is to make the knowledge your own. It is not enough to simply read what is in the course literature or skim through your notes. You need to gain a deeper understanding of what you have learned, and you need to put your own words to the knowledge before it is forgotten. This understanding helps you remember, and vice versa. The study techniques under "after" are designed to assist you with that. The techniques below focus on important skills that help you become even more effective in your university studies.

## 1. Summarize

Summarize what was said in the previous lecture within the courses you are currently studying. This is a form of study technique that can be done after each lecture, lab, exercise, etc. Take five minutes during the break, either by yourself or in a group. Continually recalling what you have learned enhances our memory. If you jot down brief notes, you can also retrieve to them before the exam or during revision.

## 2. Study diary

A study diary can be seen as a complement to notes. The diary can be a regular notebook or an online app. Choose what works best for you. In the study diary, you

jot down what you have learned, day by day. It should be concise (100 - 300 words). Also, write down your objectives. If you record keywords or summaries of what you've learned, the study diary becomes perfect for use during revision. When it's time for review, look at the summary or keyword and contemplate what you can recall from it. Also, take a look at yesterday's summary and try to recall what you read then. This way, you build up a knowledge bank, and everything you have learned becomes clear to you.

### 3. Relect after you have read a text

After you have finished reading a text, such as a book chapter or an article, you should go back and reflect on what you have read using the following questions:

- What was it that you read?
- Why did you read it?
- What was the main point of what you read?
- What have you learned from reading the text?
- How do you connect what you have learned to your previous knowledge?
- Is there anything you want to find out more about? If so, how do you go about finding that out?

### 4. Associate and concretize knowledge

Connecting or relating new knowledge to something we already know is effective for memory. By doing so, we give the new information we absorb a clear meaning. Take a piece of paper and quickly write down twelve specific subjects that you know something about, such as apple pie, car engines, comic books, particle physics, Swedish royal history, etc. Then, randomly select two words at a time from these and associate them with each other (there are fifty-five different combinations). What connections can you make between the words? Between particle physics and apple pie? Atoms like apples, dividing a pie into four parts, similar to a proton being split in a cyclotron? Particles that make up the pie? Etc.

Make many connections. Some will be nonsense, uninteresting, but it doesn't matter. Some connections will prove to be really relevant and even exciting to delve further into.

### 5. Reasoning about open-ended questions

This is an exercise in using logical

thinking and seeing where an idea takes us. We often don't know this in advance. Therefore, don't settle for just coming up with a single consequence; instead, practice thinking in as many directions as possible. Feel free to discuss it with someone. The only important thing is to actually think, i.e., not just give a simple "yes/no" or free-associate.

What would it mean if the freezing point of water were magically raised to +1°C? Step 1: What contexts can you think of where the state of water (solid/liquid) matters? Step 2: What does it mean for these contexts if water could freeze into ice at a temperature where it is currently liquid? Imagine if we started using gumdrops instead of money? How would this affect the economy?

- Assume that we invent a machine that - against the principle of energy conservation - can destroy energy but not create it. What consequences would this have? How could it be utilized?
- What would it mean if the voting age in Sweden were raised to 48 years? And if it were lowered to 10 years? What if voting rights were in proportion or inverse proportion to wealth?
- What would happen if someone invented a way for people to sustain themselves through photosynthesis?
- What would it mean for the universe if  $\pi$  were exactly equal to 3.14, and not, as it is now, an irrational number?
- What consequences would it have for Swedish trade if water could be used as fuel for cars?
- Under what conditions could a person become 10 meters tall?



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## 7. The body part system

To know something "like the back of one's hand" is a concrete memory technique. The body part system utilizes the natural memory associated with various parts of the body, hands, feet, etc. What we want to remember is placed as a concrete object on one body part or another, and we imagine how it feels and what it looks like. The technique is best explained through an exercise.

The first step is to go through all parts of the body that will be used in this memory method. A suitable order is to start with the most obvious limbs, such as the hands, etc., and then gradually refine if more parts are needed. Here is a suggestion. Direct your attention in turn to the following body parts, feel it, sense with it, and imagine how it looks:

Right hand - left hand - right foot - left foot - right knee - left knee - right shoulder - left shoulder - neck - on top of the head - back - mouth - right cheek - left cheek - nose - right ear - left ear - right eye - left eye - forehead - right calf - left calf - right thigh - left thigh - right upper arm - left upper arm - right thumb - index finger - middle finger - ring finger - pinkie finger, etc.

## 8. Remembering with the help of body parts

Memorize the following words by concretizing them in turn, and then place them on the body parts you imagine in the previous exercise. Do not make the mistake of skipping the concretization step.

- Sailor - raisin - mushroom - tray - kitten - sports training - oak leaf - mobilization - cheese - soundbox - iron handling - marrowfulness - freezer wrap - harbor master - publication - layout - congress hall - credit borrower - barley porridge - dialect

Feel your right hand, feel (and see) how with your right hand you grab a sailor in full uniform. Feel your left hand, feel and see how your left hand is filled with raisins, falling between your fingers. Feel your right foot, feel and see how with your right foot, barefoot, you crush a large mushroom. And so on.

## 9. Wordchain

Let's now do another variation of the association exercise, a so-called word chain or linked list. We have a long list of words and will link them together, the first with the second, the second with the third, the third with the fourth, and so on. Without memory techniques, it's uncommon for someone to remember more than 5-7 words. With memory techniques, you can easily remember them all. Take it easy and follow the recommendations: vivid images where something is happening all the time. Create a little story out of it all. For example, if the words are "magpie - splash - swallow," an association chain could be that you see a big and ugly magpie on the street, jumping in a puddle, splashing water on everyone around, someone gets annoyed and walks up to the magpie, swallowing it to the sound of a "gulp." The exercise, with 20 words in a chain, shouldn't take more than a maximum of 2-3 minutes.

Candy - chlorophyll - fiber - vibration - square - game - symmetry - gold - freedom - haunt - remote control - composer - utility - salt - outside - table - foam - letterpress - lever - reflect - noise.

Then go through all the words from the beginning and see if you remember them; sneak a peek if needed. Take a short break of about 10 minutes and think about something else. After the break, start with the first word, candy, and see if you can unravel the entire chain from your memory.



Photographer: Peter Widing

Do you remember the word chain from the previous exercise? If you didn't memorize it, do so now. Then wait for ten minutes before doing the following exercise: Start with the first word and see if you can recall the entire chain from memory without looking at the words. Pay close attention to how this feels, as you will learn something about how your own memory works in practice.

If you still remember it after ten minutes, forget it for the day, with a clear conscience. Try repeating the exercise tomorrow and see if you still recall it.

Note in the same way how the memories have been preserved (and perhaps changed). Memory techniques are, to a large extent, an art, something you become more skilled at with practice. Bringing forth memories is a part of this art, becoming familiar with how your own brain works. There's much to learn there.

# Keep track of when and how you study

This task is about mapping out how a week looks for you. Begin by filling in the schedule on the next page. Include when you study, eat, exercise, and so on. See what you spend your time on and also consider if you are effective when studying.

Start from how a typical study week looks. By filling in the schedule, you get a clearer picture of how much time you dedicate to your studies, the priorities you make, but also how many hours you spend on leisure activities outside of your studies. This way, you can find a balance between free time and studies.

After completing the schedule on the next page, answer and reflect on the questions in the following exercise, Study Planning.

**Mapp out a study week**

<b>Time</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>	<b>Sunday</b>
<b>6-7 am</b>							
<b>7-8</b>							
<b>8-9</b>							
<b>9-10</b>							
<b>10-11</b>							
<b>11-12</b>							
<b>12-1 pm</b>							
<b>1-2</b>							
<b>2-3</b>							
<b>3-4</b>							
<b>4-5</b>							
<b>5-6</b>							
<b>6-7</b>							
<b>7-8</b>							
<b>8-9</b>							
<b>9-10</b>							
<b>10-11</b>							

# Study Planning

## **Follow-up:**

*Take the weekly schedule you filled in during the past week and answer the questions below:*

- » Was there anything that surprised you? If so, what?
- » How much do you study each week?
- » Is the time you spend sufficient?
- » Did you miss any activity during the week?

## **Plan for the next week:**

*Take a new weekly schedule and fill in the planning for the*

- » Fill in lectures/exercises/labs for the week
- » Add time for meals and sleep
- » Include other recurring activities, for example, exercise
- » When is there time for studying? Add your own study time

## **To reflect on:**

*The following questions can help you create the best possible planning schedule and achieve a balanced life:*

- » What time do you study the best?
- » What distractors do you have during the week? What will you do about them?
- » Is there anything you do that you don't want to do? What can you do about it?
- » What gives you energy?
- » What do you need in terms of calm/peace and rest/slee?

# Action plan

- My own approach to succeed in studies

## Goals

Long-term goals

Short-term goals

Rewards

## Study Environment

This is where I study the best

This is what I need in my study space

This bothers me when I'm trying to study



## **Study Techniques – BEFORE**

**Mental attitude; Why am I taking the course, what is my goal with the course?**

**Overview and planning; what to study and when?**

**Other**

## **Study Techniques – DURING**

**Activities; what to do during lectures, self-study, and more**

**Skills: for example, how to take notes, read, and more**

**Other**

## **Study Techniques – AFTER**

**Repetition**

**Processing what I have learned**

**Other**

**Potential obstacles  
and distractions**

**This prevents me from studying/distractors**

**Solutions**

**I start studying according to my action plan:**

# Planning

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<b>Time</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>	<b>Sunday</b>
<b>06-07 am</b>							
<b>07-08</b>							
<b>08-09</b>							
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<b>9-10</b>							
<b>10-11</b>							

# Keep track of when and how you study

## Study techniques - literature/links/social media

### Literature

- Plugga smart och lär dig mer - Björn Liljeqvist
- Lär för din framtid – så lyckas du med dina högskolestudier - Chronholm-Andersson
- 101 tips för framgångsrika studier – Anna Tebelius Bodin
- Studieteknik för universitet/högskola – Mattias Hellqvist och Mats Eneroth
- Konsten att lyckas med sina studier – Bosse Angelö

### Länkar

- Lärstilstest: [www.vark-learn.com](http://www.vark-learn.com)
- <http://www.studieteknik.info/>

### Appar

- GTD – Getting things done
- Istudiez/Pro/ Lite
- Free flashcards study helper

### Youtube

- Studieteknik för högskolan del 1 – 5 (studievägledare Ingemar Andersson – Campus Gotland)

# Study Techniques