

How to Take Smart Notes, Ahren

References:

We write all the time, but books on how to write usually only focus on writing a big piece, not on how to take notes. The process of writing begins much earlier than sitting at a blank screen thinking about what to write, and most books help at this point, when it is too late. This book is about the early stages, the preparation stages.

/ [summary](#) / [How to Take Smart Notes, Ahren \(1-3\)](#) / # / [Notetaking](#) /

IQ only gets you so far in academia, you need self-discipline to get you the rest of the way. You have to work hard and work smart.

/ [summary](#) / [How to Take Smart Notes, Ahren \(4\)](#) / # / [Success in writing](#) / [Self-control](#)

It's better to not have to use willpower than to have willpower.

/ [How to Take Smart Notes, Ahren \(5\)](#) / [summary](#) / # / [Perseverance](#) / [Self-control](#)

Tension between planning and the creative process

If you make a plan, you impose a structure on yourself; it makes you inflexible. To keep going according to plan, you have to push yourself and employ willpower. This is not only demotivating, but also unsuitable for an open-ended process like research, thinking or studying in general, where we have to adjust our next steps with every new insight, understanding or achievement – which we ideally have on a regular basis and not just as an exception. Even though planning is often at odds with the very idea of research and learning, it is the mantra of most study guides and self-help books on academic writing. How do you plan for insight, which, by definition, cannot be anticipated?

/ [How to Take Smart Notes, Ahren \(6\)](#) / [quote](#) / # / [Planning](#) / [Motivational tips](#) / [The research and writing process](#)

Bad students are confident (Dunning-Kruger effect) because they have no idea just how much research is out there and how little they know of it. Good students often struggle with the impostor syndrome. They DO know how much is out there and how little they know by comparison.

/ [How to Take Smart Notes, Ahren \(8\)](#) / [summary](#) / # / [Dunning-Kruger effect](#) / [The research and writing process](#) / [Impostor syndrome](#)

Organizing our notes by topic, subtopic and subsubtopic overcomplicates things and keeps us from "finding surprising connections" between our thoughts.

Instead, we should ask which context(s) we would want to stumble upon this note again.

/ [How to Take Smart Notes, Ahren \(8, 40\)](#) / [summary](#) / # / [Organizing knowledge](#)

Unfortunately, David Allen's technique cannot simply be transferred to the task of insightful writing. The first reason is that GTD relies on clearly defined objectives, whereas insight cannot be

predetermined by definition. We usually start with rather vague ideas that are bound to change until they become clearer in the course of our research...

The other reason is that GTD requires projects to be broken down into smaller, concrete “next steps.” Of course, insightful writing or academic work is also done one step at a time, but these are most often too small to be worth writing down (looking up a footnote, rereading a chapter, writing a paragraph) or too grand to be finished in one go. It is also difficult to anticipate which step has to be taken after the next one.

[/ How to Take Smart Notes, Ahren \(11\) / quote / # / Getting Things Done / The research and writing process](#)

Luhmann had two slipboxes, a bibliographic one and one with his ideas.

Whenever he read something, he would write the bibliographic information on one side of a card and make brief notes about the content on the other side (Schmidt 2013, 170). These notes would end up in the bibliographic slip-box.

In a second step, shortly after, he would look at his brief notes and think about their relevance for his own thinking and writing. He then would turn to the main slip-box and write his ideas, comments and thoughts on new pieces of paper, using only one for each idea and restricting himself to one side of the paper, to make it easier to read them later without having to take them out of the box.

The trick is that he did not organise his notes by topic, but in the rather abstract way of giving them fixed numbers. The numbers bore no meaning and were only there to identify each note permanently. If a new note was relevant or directly referred to an already existing note, such as a comment, correction or addition, he added it directly behind the previous note. If the existing note had the number 22, the new note would become note number 23. If 23 already existed, he named the new note 22a. By alternating numbers and letters, with some slashes and commas in between, he was able to branch out into as many strings of thought as he liked.

[/ How to Take Smart Notes, Ahren \(18-19\) / quote / # / Zettelkasten](#)

The notetaking process should be the writing process. Writing is the context for thinking clearly, it is the medium of thought. And what we think of as the writing process is just gathering notes and ordering them into the manuscript. Take notes towards a context or publishing project, not a topic. And translate the idea into your own words.

[/ How to Take Smart Notes, Ahren \(22\) / summary / # / The research and writing process](#)

Ahren's recommended process:

- Have pen and paper on hand to grab fleeting thoughts, and save them into a physical inbox for processing later.
- When reading, take notes on the content, in your own words.
- Once a day go through the notes from the steps above and think about how they relate to your own research, thinking or interests. Write one note per idea in full sentences, brief, precise, with sources.
- Throw away the fleeting notes, file the reading notes in the literature slipbox
- File the idea notes in the main slipbox, either behind an existing note that it relates to, or behind the last note in the system. Add links to related notes. Link to the note from your index system.
- Follow your interests

- Choose a topic to write on based on what you have in your system
- Gather the relevant notes and translate them into a rough draft.
- Edit and proofread.

"The idea is not to collect, but to develop ideas, arguments and discussions. Does the new information contradict, correct, support or add to what you already have (in the slip-box or on your mind)? Can you combine ideas to generate something new? What questions are triggered by them?"

/ [How to Take Smart Notes, Ahren \(23-26\)](#) / **summary + quote** / # / [Zettelkasten](#) / [The research and writing process](#)

Develop topics and projects from the bottom up. "Just follow your interest and always take the path that promises the most insight....Don't cling to an idea if another, more promising one gains momentum. The more you become interested in something, the more you will read and think about it, the more notes you will collect and the more likely it is that you will generate questions from it. It might be exactly what you were interested in from the beginning, but it is more likely that your interests will have changed – that is what insight does."

/ [How to Take Smart Notes, Ahren \(25\)](#) / **summary** / # / [The research and writing process](#)

Follow many ideas and lines of thought at once. Some are relevant to your current topic, but all are helpful, for later research or simply to sharpen your thought.

/ [How to Take Smart Notes, Ahren \(27\)](#) / **summary** / # / [The research and writing process](#)

All study is for creating public knowledge. Only a little is published, but there are other ways in which knowledge becomes public. blogs, powerpoints, discussions, assignments read by a teacher, handouts, etc.

"If writing is the medium of research and studying nothing else than research, then there is no reason not to work as if nothing else counts than writing." - not that you neglect other steps like reading and conferences in order to only write, but that the goal of the writing project should shape your notetaking. It sharpens your focus and helps you avoid wasting time.

"Even if you decide never to write a single line of a manuscript, you will improve your reading, thinking and other intellectual skills just by doing everything as if nothing counts other than writing." (37)

/ [How to Take Smart Notes, Ahren \(35-37\)](#) / **summary** / # / [The research and writing process](#)

Forcing yourself to re-phrase everything in your own words teaches you to think, reinforces the learning, and helps you understand arguments better, express yourself more clearly, and tell weak arguments from strong ones.

/ [How to Take Smart Notes, Ahren \(37\)](#) / **summary** / # / [The research and writing process](#)

It is important to distinguish between fleeting notes, project-related notes, and permanent notes. Most people try to make all their notes fit into one category, and create a mess.

/ [How to Take Smart Notes, Ahren \(37\)](#) / **summary** / # / [Notetaking](#)

A good indication that a note has been left unprocessed too long is when you no longer understand

what you meant or it appears banal. In the first case, you forgot what it was supposed to remind you of. In the second case, you forgot the context that gave it its meaning.

/ [How to Take Smart Notes, Ahren \(44\)](#) / **quote** / # / [Notetaking](#)

In contrast to the fleeting notes, every permanent note for the slip-box is elaborated enough to have the potential to become part of or inspire a final written piece, but that can not be decided on up front as their relevance depends on future thinking and developments. The notes are no longer reminders of thoughts or ideas, but contain the actual thought or idea in written form.

/ [How to Take Smart Notes, Ahren \(45\)](#) / **quote** / # / [Notetaking](#)

Work, and writing, should be more like the endergonic reaction - a reaction that continues on its own and even releases energy - than like an exergonic reaction - in which you need to constantly give it more energy to keep it going.

"Sometimes we feel like our work is draining our energy and we can only move forward if we put more and more energy into it. But sometimes it is the opposite. Once we get into the workflow, it is as if the work itself gains momentum, pulling us along and sometimes even energizing us. This is the kind of dynamic we are looking for."

"Only if the work itself becomes rewarding can the dynamic of motivation and reward become self-sustainable and propel the whole process forward"

/ [How to Take Smart Notes, Ahren \(51-52\)](#) / **summary and quote** / # / [The research and writing process](#) / [Motivational tips](#)

The slip-box is not a collection of notes. Working with it is less about retrieving specific notes and more about being pointed to relevant facts and generating insight by letting ideas mingle. Its usability grows with its size, not just linearly but exponentially.

/ [How to Take Smart Notes, Ahren \(55\)](#) / **quote** / # / [ZettelKasten](#)

The principle of not multitasking, and giving each task your undivided attention in 'flow' needs to be applied to the many tasks of the researching and writing process.

- Gathering a bibliography
- Reading
- Reflecting
- Getting ideas
- Making connections
- Finding the right words
- Structuring, organizing
- Editing, proofing and rewriting

They need to be distinguished and treated separately, switching between roles. They each require a different kind of attention and thinking process.

/ [How to Take Smart Notes, Ahren \(57-60\)](#) / **summary** / # / [The research and writing process](#)

Psychologists used to associate scientific work exclusively with focussed attention, while other, more floating kinds of attention were exclusively associated with creative work like art. We know today that we need both kinds of attention for art and science.

"The key to creativity is being able to switch between a wide-open, playful mind and a narrow analytical frame." (Dean, 2013, 152)"

[/ How to Take Smart Notes, Ahren \(63\) / q / # / Attention / Art vs science](#)

Because trainees lack the experience to judge a situation correctly and confidently, they need to stick to the rules they were taught, much to the delight of their teachers.

Experts, on the other hand, have internalised the necessary knowledge so they don't have to actively remember rules or think consciously about their choices.

[/ How to Take Smart Notes, Ahren \(66\) / q' / # / Experts](#)

he explained that all the waiters had no problem remembering the orders and matching them with the guests at the table. But the very second diners left the restaurant, the waiters all forgot them completely and focused on the next group. Zeigarnik successfully reproduced what is now known as the Zeigarnik effect: Open tasks tend to occupy our short-term memory – until they are done. That is why we get so easily distracted by thoughts of unfinished tasks, regardless of their importance.

But thanks to Zeigarnik's follow-up research, we also know that we don't actually have to finish tasks to convince our brains to stop thinking about them. All we have to do is to write them down in a way that convinces us that it will be taken care of. That's right: The brain doesn't distinguish between an actual finished task and one that is postponed by taking a note. By writing something down, we literally get it out of our heads. This is why David Allen's "Getting things done" system works: The secret to have a "mind like water" is to get all the little stuff out of our short-term memory.

[/ How to Take Smart Notes, Ahren \(69\) / q / # / Memory / Attention / Distractions](#)

[to combat procrastination and avoid ego depletion] Instead of forcing ourselves to do something we don't feel like doing, we need to find a way to make us feel like doing what moves our project further along. Doing the work that need to be done without having to apply too much willpower requires a technique, a ruse.

[/ How to Take Smart Notes, Ahren \(72\) / q / # / Motivational tips](#)

It is well known that decision-making is one of the most tiring and wearying tasks, which is why people like Barack Obama or Bill Gates only wear two suit colours: dark blue or dark grey. This means they have one less decision to make in the morning, leaving more resources for the decisions that really matter.

[/ How to Take Smart Notes, Ahren \(\) / q / # / Decision-making / Motivational tips](#)

To get a good paper written, you only have to rewrite a good draft; to get a good draft written, you only have to turn a series of notes into a continuous text. And as a series of notes is just the rearrangement of notes you already have in your slip-box, all you really have to do is have a pen in your hand when you read.

[/ How to Take Smart Notes, Ahren \(74\) / q / # / The research and writing process](#)

the mere copying of quotes almost always changes their meaning by stripping them out of context, even though the words aren't changed. This is a common beginner mistake, which can only lead to a patchwork of ideas, but never a coherent thought.

[/ How to Take Smart Notes, Ahren \(75\) / q / # / Notetaking](#)

Darwin made it a habit to write down every idea or fact that was critical of his theories. So when he wrote, he would deal with or anticipate the objections and countertheories.

"Confirmation bias is tackled here in two steps: First, by turning the whole writing process on its head, and secondly, by changing the incentives from finding confirming facts to an indiscriminate gathering of any relevant information regardless of what argument it will support."

[/ How to Take Smart Notes, Ahren \(79\) / sq / # / Confirmation bias / The research and writing process](#)

[Writing something in our own words, or testing ourselves on our learning, is superior to re-reading]: Rereading, therefore, makes us feel we have learned what we read: "I know that already!" Our brains are terrible teachers in this regard. We face here the same choice between methods that make us feel like we learned something and methods that truly do make us learn something.

[/ How to Take Smart Notes, Ahren \(86\) / q / # / Notetaking](#)

Learning requires effort, because we have to think to understand and we need to actively retrieve old knowledge to convince our brains to connect it with new ideas as cues. To understand how groundbreaking this idea is, it helps to remember how much effort teachers still put into the attempt to make learning easier for their students by prearranging information, sorting it into modules, categories and themes. By doing that, they achieve the opposite of what they intend to do. They make it harder for the student to learn because they set everything up for reviewing, taking away the opportunity to build meaningful connections and to make sense of something by translating it into one's own language. It is like fast food: It is neither nutritious nor very enjoyable, it is just convenient.

"Manipulations such as variation, spacing, introducing contextual interference, and using tests, rather than presentations, as learning events, all share the property that they appear during the learning process to impede learning, but they then often enhance learning as measured by post-training tests of retention and transfer. Conversely, manipulations such as keeping conditions constant and predictable and massing trials on a given task often appear to enhance the rate of learning during instruction or training, but then typically fail to support long-term retention and transfer" (Bjork, 2011, 8).

[/ How to Take Smart Notes, Ahren \(87\) / q / # / Philosophy of teaching / Teaching methods](#)

Pure re-viewing just doesn't make any sense, neither for understanding nor for learning. It is debatable if we even can call it learning.

/ [How to Take Smart Notes, Ahren \(89\)](#) / **q** / # / [Studying tips](#) / [Cramming](#)

the best-researched and most successful learning method is elaboration...Elaboration means nothing other than really thinking about the meaning of what we read, how it could inform different questions and topics and how it could be combined with other knowledge.

/ [How to Take Smart Notes, Ahren \(89\)](#) / **q** / # / [Studying tips](#) / [The research and writing process](#)

In the zettelkasten method, the facts and info go into the system, whereas the thinking and understanding are done in your brain. The opposite of cramming.

/ [How to Take Smart Notes, Ahren \(89\)](#) / **s** / # /