

# ATOMIC NOTE-TAKING

THE ULTIMATE ZETTELKASTEN  
GUIDE

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<https://atomicnotetaking.com>

# Contents

<b>INTRODUCTION</b>	<b>12</b>
Who this book is for	14
What this book promises	15
<b>PART 1: KNOWLEDGE MANAGEMENT</b>	<b>17</b>
What is knowledge management?	18
Knowledge management is vital	19
Who benefits from knowledge management?	21
For the undergraduate student	21
For the PHD student	22
For the teacher	23
For the content creator	23
For the entrepreneur	24
For the programmer	25
For the autodidact	26
Externalisation of your thoughts	26
The different types of note-taking	27
The 5 categories of note-taking methods	27
Capture focused note-taking	28
Organisation based note-taking	29
Summarisation based note-taking	30

Understanding based note-taking	30
Thinking based note-taking	31
<b>PART 2: THE ZETTELKASTEN METHOD</b>	<b>33</b>
<b>What is the Zettelkasten?</b>	<b>34</b>
The main benefits	35
Zettelkasten versus The Commonplace	36
<b>Zettelkasten concepts</b>	<b>37</b>
<b>The Zettelkasten system</b>	<b>39</b>
Really! Only one idea on a note?	42
How to convert a long note to atomic notes	43
<b>The Zettelkasten workflow</b>	<b>47</b>
<b>Fleeting notes</b>	<b>49</b>
<b>Literature notes</b>	<b>50</b>
Avoid confirmation bias	51
Asking questions in your literature notes	53
Referencing the source material	54
<b>Permanent notes</b>	<b>55</b>
How to process a literature note into a new permanent note	56
Reference your literature note	56
An example permanent note	57
Does the new note contradict what's already in your slip box?	58
Does the new note duplicate what's already in your slip box?	58

What do you do about question literature notes?	59
<b>The slip box</b>	<b>60</b>
<b>Map of Content (MoC)</b>	<b>61</b>
Organising your notes with a Map of Content	62
A Map of Content is hierarchical	62
Folders vs Maps of Content	65
Use a Map of Content as a playground for ideas	66
Index notes, Structure notes, and Maps of Content	68
<b>Connecting ideas</b>	<b>68</b>
When to link notes	69
When not to link notes	73
Intermediary notes	74
Conversational links vs archivist links	76
Bi-directional links	77
<b>The emergence of new ideas</b>	<b>78</b>
<b>Comparing to how our brain stores information</b>	<b>79</b>
<b>Used as a tool to think</b>	<b>80</b>
<b>Used as a tool to publish</b>	<b>81</b>
Top down publishing	81
Bottom up publishing	83
The benefits of creating published work	83
<b>Zettelkasten quick summary</b>	<b>85</b>

<b>PART 3: ZETTELKASTEN BY EXAMPLE</b>	<b>86</b>
<b>Fleeting notes by example</b>	<b>87</b>
Fleeting notes from the Kindle app	87
Adding my own thoughts to book highlights	89
Fleeting notes from PDF documents	93
Fleeting notes from video courses	94
Fleeting notes from lectures and seminars	97
Fleeting notes from audiobooks	99
Fleeting notes from an article	100
<b>Literature notes by example</b>	<b>109</b>
<b>Permanent notes by example</b>	<b>113</b>
Organising my thinking using a Map of Content	121
Rewriting for a better understanding	121
Adding intermediary idea notes	122
<b>Maps of Content by example</b>	<b>124</b>
<b>Connecting ideas by example</b>	<b>128</b>
<b>Ask questions to your Zettelkasten by example</b>	<b>130</b>
Asking the right questions	131
<b>Writing a blog article by example</b>	<b>133</b>
<b>PART 4: ADVANCED ZETTELKASTEN</b>	<b>140</b>
<b>Creating fleeting notes</b>	<b>141</b>
<b>Studying from books</b>	<b>143</b>

Ebooks	143
Physical books	143
Storing your book's fleeing notes	147
Read multiple books at a time	147
Break the book into chunks	150
<b>Studying from videos</b>	<b>157</b>
<b>Studying from audiobooks</b>	<b>161</b>
Book summaries	164
<b>Sequencing your notes</b>	<b>165</b>
The Folgezettel system	165
Limitations of the Folgezettel system	167
Datetime system	167
Choosing the right numbering system	168
<b>Referencing</b>	<b>168</b>
Bibliography references	169
Citations	171
<b>Creating original insights from your permanent notes</b>	<b>173</b>
<b>Organising the chaos</b>	<b>176</b>
<b>Thinking like a database</b>	<b>177</b>
Storing your index notes	177
Should permanent notes always be added to an index note?	178
<b>A shared Zettelkasten within a team</b>	<b>178</b>
The challenges with a team Zettelkasten	179
The alternative to a shared Zettelkasten	181

<b>The discipline of parallel workflows</b>	<b>182</b>
The health of your Zettelkasten	184
Building a healthy Zettelkasten	184
<b>PART 5: STUDENT Q&amp;A</b>	<b>186</b>
<b>Atomic notes</b>	<b>187</b>
What if my notes are too long?	187
<b>Fleeting and literature notes</b>	<b>190</b>
Why bother with fleeting notes when reading a book?	190
What's different about literature and permanent notes?	191
Can't I just write permanent notes?	191
How do I use daily notes with the Zettelkasten method?	193
What do I do about data tables and diagrams?	195
<b>Adding to your permanent notes</b>	<b>196</b>
Do all literature notes become a permanent note?	196
What if my permanent note is the same as my literature note?	198
Do I use one slip box for unrelated topics?	199
How do you name your notes?	202
What if two notes have the same name?	203
<b>Referencing</b>	<b>205</b>
How do you give credit to the original speaker or author?	205
<b>Maps of Content</b>	<b>206</b>
How many Maps of Content should I create?	206
<b>Managing your notes</b>	<b>207</b>

When do you update existing notes?	207
What happens to fleeting and literature notes?	208
Wont my notes get too messy without folders?	209
Who has time to turn fleeting notes into literature notes?	210
What do you do with notes that are no longer relevant?	212
What should I do with old versions of notes?	212
When should I use hashtags?	213
How do you store questions in your Zettelkasten?	214
<b>Numbering and hierarchy</b>	<b>217</b>
How do you number your notes?	217
Is note hierarchy discouraged?	218
<b>Linking</b>	<b>220</b>
How do you create bi-directional links between notes?	220
How do you find the right notes to link to?	221
How do you connect ideas from different topics together?	222
<b>Studying</b>	<b>224</b>
Can you use it as a student in a classroom?	224
Is it useful for visual learners?	226
What if I want to capture a quote?	227
Writing in my own words, isn't that a permanent note?	229
Others say book notes are literature notes?	230
How can I use this to study a big textbook?	232
How do I deal with a 5 hour lecture in my notes?	233
Can the Zettelkasten be applied to technical books?	234

Can you use this method to study for certification exams?	236
How far do you go down the rabbit hole of things to study?	239
<b>Original thinking</b>	<b>240</b>
My notes aren't original, I'm just copying from a book	240
How do I write notes in my own words?	241
I've run out of notes to process	242
When can I connect ideas in my slip box?	243
Am I plagiarising when I write my own articles?	244
<b>Creating projects from your Zettelkasten</b>	<b>245</b>
When can I write blog posts from my Zettelkasten?	245
What if I have a project before my notes?	246
<b>PART 6: NOTE-TAKING AND AI</b>	<b>248</b>
<b>The big question</b>	<b>249</b>
<b>Thinking vs tools</b>	<b>250</b>
<b>AI vs deep thinking</b>	<b>251</b>
<b>AI vs creative skills</b>	<b>251</b>
Where AI can be powerful	252
An AI assistant	253
An AI tutor	253

<b>PART 7: APPS</b>	<b>255</b>
<b>How to choose the right note-taking app for you</b>	<b>256</b>
An Integrated Thinking Environment (ITE)	256
What you see is what you get (WYSIWYG)	257
Markdown as a primary editor	257
Long vs short notes	258
Local vs cloud vs hybrid	259
Desktop, tablet or mobile	260
<b>The future of note-taking</b>	<b>261</b>
Flowtelic	262
<b>FINAL THOUGHTS</b>	<b>265</b>



# INTRODUCTION

I hated reading in school. My mind would drift as my eyes read the words. I was a slow reader, and doing anything you hate slowly only makes the experience more torturous. I dreaded reading out loud—especially as a shy kid.

Fast forward twenty four years and I not only love reading, but have read hundreds of books and teach knowledge management techniques on YouTube. So what changed?

It was audiobooks. In 2014 I wanted to try them out and I was hooked. With one month and twenty seven days of audio content consumed, I can safely say that it has changed my life.

I noticed that I became happier and more knowledgeable about a wide range of topics. My sense of anxiety and stress reduced. I have gained skills in mindset, business and relationships. It's given me a perspective of which to tackle all of life's challenges.

This is the gift that I want to pay forward.

In 2020 I was on the hunt for a way to remember what I read. After all, I want to make deep, meaningful YouTube videos to help inspire others from the life-changing books I've read. That's when I stumbled upon the Zettelkasten note-taking method through the book *How to Take Smart Notes* by Sönke Ahrens.

Suddenly everything clicked into place. I had a way to capture thoughts, ideas, knowledge and references. It answered the question of *How I can become a better communicator, writer and YouTuber?* It gave me the system I was looking for.

The book, while fantastic for giving me the conceptual understanding of the Zettelkasten method, I felt lacked examples to properly understand it. I tried to find some online, but couldn't find what I needed. So, I turned to YouTube and started to create my own. As I shared my understanding and learning of the process, others started to praise the clarity of how I presented it.

## WHO THIS BOOK IS FOR

Through building a community of like minded learners, I've come to explore the depths of the system through teaching it and the questions I've received. This book is the result of all this knowledge.

My journey doesn't end here though. As a tech entrepreneur at heart, I have the desire to create something truly remarkable in this space. Something that aligns with my understanding to become a better thinker and action taker. Something that makes my heart sing and feels different to anything else out there.

So I created Flowtelic. My own note-taking app that brings the heart of the techniques in this book to the forefront. While it has a long way to go, I hope this book can give you an insight into how I think about solving the problem and where Flowtelic can be a perfect match.



## Who this book is for

This book is for anyone who recognises that information is only as useful as how you act on it. It is for those who feel that average is boring and there's a world of opportunity within arm's reach. It is for those who are up for a challenge and like to experiment to see what happens.

This book is for the students, teachers, entrepreneurs, programmers, content creators and the curious—the autodidacts—who just love following your curiosity and have a deep gratitude for the wealth of knowledge lying beyond the horizon.

# What this book promises

This book is broken down into seven parts.

- 1. Knowledge Management**—Here you'll understand what knowledge management means and why it's a valuable tool to help you in your journey. We'll cover the range of note-taking techniques and where the Zettelkasten note-taking method fits in the big picture.
- 2. The Zettelkasten Method**—We'll start with an overview of the method and its two main components, the system and the workflow. You'll have a solid understanding of what it is, how it works and why it works.
- 3. Zettelkasten By Example**—Now we'll go deeper into the system and show it in action. You'll get real examples of how to apply it in various situations along with inspiration of how to use it in your own knowledge journey.
- 4. Advanced Zettelkasten**—Let's really showcase how to get the most out of it. You'll see how to apply the Zettelkasten in a variety of ways.
- 5. Student Q&A**—With hundreds of questions I've received from YouTube and my community pages, I've compiled the best questions and take you through how to approach answering them. By the end you'll have a well rounded understanding of the challenges and approaches to make the Zettelkasten work in any scenario.
- 6. Artificial Intelligence**—AI is making waves and we'll explore how to think about AI in your note-taking and what the future looks like.
- 7. Apps**—There are many note-taking apps that you can use for your knowledge journey. This section will help you understand what to look out for when finding the perfect app for you.

## WHAT THIS BOOK PROMISES

I aim for this book to leave you with a deep and clear understanding to build your own Zettelkasten and unlock the world's knowledge. I want you to be left with a giddy excitement and confidence to use it in your knowledge journey.



**PART 1**  
**KNOWLEDGE**  
**MANAGEMENT**

We often think of knowledge management as a practice reserved for students. For those who need to cram vast amounts of knowledge to pass exams and complete assignments. We seldom think of knowledge management on an individual or professional level.

You are different. Something has drawn you to this book. Maybe you are that student, who wants to figure out how to get through vast amounts of learning material and ace your assignments. Maybe you're a working professional who has discovered that a knowledge system is the key to being better at what you do. Or maybe you're like me, an autodidact, who loves to learn and be curious, and a knowledge system is the only way to remember what you've discovered.

Regardless of your goals, this book will give you everything you need to create a powerful knowledge system that will be valuable for a lifetime.

## What is knowledge management?

It's important to make sure that we're on the same page when it comes to what knowledge management is.

Knowledge management is one or more methods to capture, organise, consume, comprehend and reflect on information that is meaningful to you.

A great knowledge management system can help you with two main aspects of how you learn and process information:

- **Divergent thinking**—Where you explore and open your mind to new ideas. This is achieved by asking questions, exploring multiple perspectives and keeping your learning broad.
- **Convergent thinking**—Where you start to reduce your thinking to more concrete ideas that have been critically assessed.

Your knowledge management skills will give you the ability to perform both divergent and convergent thinking. The goal is not to just make your knowledge accessible, but also actionable.

As the author of this book, my goal is not to help you create the perfect knowledge system, but rather help you to go on and do great things.

Knowledge management is like learning to read. It becomes the gateway to learning anything.

## **Knowledge management is vital**

There's a lot of information out there. An awful lot. Too much. Some of it is useful, some of it is harmful, some of it is a distraction. But you cannot deny that we're in the information overload era.

Knowing how to manage this is a crucial skill. You want to be able to navigate the world and remain calm, collected and in control. This however does not happen by default. You're forever being told what to think. Information can be used as a tool to weaponize and influence your behaviour. You become quick to judge and good luck having any sensible discussion on the topic.

Only an active effort of managing your knowledge can bring order to the chaos. The only viable alternative is to turn it off completely.

Not many people consider that knowledge management is a skill that can be improved. It's easy to have this innate trust that if we hear something, we'll remember it. But that is rarely the case. And if we do, we struggle to remember it accurately.

How can you be someone who can speak with confidence and authority? How can you be someone who has a great memory and be a fountain of insight and wisdom? You want your voice to be heard and your opinions to be valued.

You need a system to manage your knowledge. If you don't have one, you'll continue drifting in the status quo of mediocrity. Stark words I know, but I stand by them.

Take knowledge workers for example. One of the most fascinating things is that they don't look to improve their knowledge management skills—ironic given the label.

Now compare this to being an athlete. They are continually looking for ways to improve their skills. They use deliberate practice—where they stretch themselves just beyond their own level of competency to push their abilities beyond what they are currently capable of.

Knowledge workers do not do this. As Cal Newport puts it in *So Good They Can't Ignore You*:

*“Musicians, athletes, and chess players know all about deliberate practice. Knowledge workers, however, do not. This is great news for knowledge workers: If you can introduce this strategy into your working life you can vault past your peers in your acquisition of career capital.”*

You want to become better at your craft. You want to open up your mind. You want to improve your communication skills. You want to become a leader. You want to become your own boss. Whatever it is that you want to improve, you have skills to learn. You need a system to do it, and do it at a level that will outpace your peers and set you apart.

Knowledge management isn't just useful in your professional life. Imagine you or a loved one becomes sick. You find yourself dealing with lots of information that you don't know what it means. You put the trust in others to make decisions for you. But you ultimately have to make the decisions. What do you base it on? The myriad of discussions, snippets of understanding and contradictory opinions? A knowledge system in this scenario is vital to making informed decisions.

## WHO BENEFITS FROM KNOWLEDGE MANAGEMENT?

I will never understand why we don't take a notepad when we visit the doctor.

Having a knowledge management system will help you remember more. It will give you the confidence to think better and use your knowledge for a greater good. But most importantly, you'll have the bug of curiosity and it will be a way of expressing that passion. It will be fun.

*"The cure to boredom is curiosity. There is no cure for curiosity."—Dorothy Parker*

## Who benefits from knowledge management?

Anyone can benefit from knowledge management. Let's explore some examples.

### For the undergraduate student

You're a student at university. You have many class lectures and lots of books to read. The measure of your work is done through assignments and exams.

In the classroom you'll be presented with slides, handouts and chapters to read. You have a lot of information to consume. But remember, it's not just about copying and pasting the content into your notes. You need to understand it. After all, it's much easier to remember something you understand than something you don't.

Your goal as a student is to organise your information in such a way that you can create revision cards for exams and reference material for assignments. Spaced repetition is a great way to test yourself until it is etched in your brain's memory.

With an atomic note-taking system, your notes become the building block to writing your assignments. The ‘thinking’ has already been done. You just have to put the words together.

A great note-taking system however will not only help you achieve this, but it will also help you understand the material better. You’ll be able to ask better questions and connect ideas.

And the best part, when your studies are complete, they won’t just be a collection of degrading memories, but you’ll have your notes in a system that will be accessible and relevant for a lifetime to come.

## **For the PHD student**

As a doctoral student your primary focus is to consider many different sources of information and make sense of them. You need to compare them and question their insights. Only when you have enough understanding can you see potential problems to solve. Problems which have never been solved before. And problems that *you* will go on to solve.

To do this, you’ll be consuming lots of papers, books and journals. You need a system that will allow you to bring them all together so they are accessible on one canvas for you to perform your thinking.

As you start to hypothesise, you need your notes stored in such a way that you’re not continually sifting through massive documents each time. You need your references broken down into atomic notes making it easy to use.

Your knowledge system must enable you to ask questions to validate your understanding or theorise a new insight. By asking these questions you will identify the gaps in your own knowledge. This will direct your research to find the answer you need.

You will later use your knowledge system as the atomic building blocks to author your own research papers.

## **For the teacher**

As a teacher your role is to help your students gain both knowledge and understanding of the subject. By having your material stored in a knowledge management system, you will be able to evolve it each academic year to ensure the feedback from past students are incorporated in the learning process.

The atomic nature of your knowledge system means you can take the core learning blocks and allow it to be repackaged in many different ways. You may use them in a slide deck, handout sheet, virtual seminar, group exercise, project assignments or even exam questions.

You can start to ask questions about your teaching methods to find the optimal way that your students engage with the material. How would you teach the concept as a group exercise? What knowledge should a student have prior to understanding the topic? What terminology would a student be familiar with? Where do they keep getting confused?

Your knowledge system not only contains the material for the subject, but the meta notes to help teach it to your students.

It doesn't have to be limited to just yourself. You can share this with other teachers and assistants so the benefits can spread far and wide.

Most importantly, by adopting these techniques, you become a better teacher. You learn how to engage your students with the material which improves their experience and understanding.

And with a great system, you enjoy the art of teaching and the subjects you are passionate to teach even more. This in turn benefits everyone.

## **For the content creator**

You're a content creator. Maybe you write on your blog, create educational content or make YouTube videos. You want to share

expert insights to your audience on topics that resonate with them. You want to be a voice of trust and authority.

Your end goal may be to make a business around your true passions, or to help create a movement by inspiring the next generation of thinking. Whatever it is, you need a knowledge strategy to communicate clearly, concisely and with expertise.

An atomic note-taking system can help you build up a wealth of knowledge that can generate endless content ideas. It can help you move away from the heavy lift of one idea at a time, to having many ideas developing simultaneously—whether that be a blog post, YouTube video or ebook.

You can use your knowledge system to start exploring how to communicate better, how to improve your reach and how to master the skills required to create engaging content that people love.

Most importantly, it helps you become a deep thinker with a consistent output that builds trust and authority.

## **For the entrepreneur**

Being an entrepreneur means that you need to learn a lot of different skills, and all at the same time. You turn to books on entrepreneurship, marketing, leadership, product development and fundraising. It's endless.

How do you go from being a content consumer to an action taker with this new knowledge? To do that you need a knowledge system that allows you to filter and organise the information that is relevant to what you need.

Your knowledge system will allow you to capture the key insights from a vast array of books and articles. You use it to capture industry specific insights that can help you build a better product and marketing strategy.

Want to create a pitch deck? Quickly find the insights and material you've worked on over the preceding months. Need the market insights, competitor landscape and user trends? Find the notes and drop them in.

What about the product or service itself? You can create insights about what it should do, the mindset of your customers, the language they use and the needs they have. All this can be documented within your knowledge system.

And as a business owner, you will be faced with many challenges where you have to make difficult decisions. By using journaling, you can think through your decision making. Things like how to hire your first employee, or do a disciplinary. It allows you to have the tools you need when you need them and be consistent in your approach time and time again.

## **For the programmer**

Learning a programming language or keeping up to date with tech can be challenging. It's easy to fall into the trap of following tutorials, but find yourself stumped when you try to apply them to your own projects. You understand it, but you just don't have the ability to recall it.

A great knowledge system allows you to capture the code snippets you discover so you can find them effortlessly when you're programming. Technical guides can be created and shared with your team. Software patterns and principles can be captured so you can evaluate the best solution to the problem and use it when it's appropriate.

As you work with tech, you may pick up small tips or encounter errors. These can be documented so you can refer back to it again in the future.

And for those who are keen to share your knowledge publicly, a knowledge system allows you to create blog posts and share your insights on social media.

## **For the autodidact**

For the autodidacts—those who love to self learn—a knowledge system is perfect for you to explore the world through the lens of your curiosity.

Organise the books, articles, quotes and ideas you encounter. Connect your ideas together. Create original thinking by expanding on the knowledge you've discovered. Become a polymath with wide knowledge and understanding. Share your thoughts. Connect with like minded people. Teach the world.

Your knowledge system will allow you to be unconstrained and go where your curiosity takes you.

## **Externalisation of your thoughts**

A knowledge system helps you externalise your knowledge. Sometimes this may be referred to as a second brain. A place where you can look up your notes without having to remember everything.

Imagine you've read a great book. It made so much sense to you as you read it. But for some reason, when you want to recall those great moments and insights, you draw a blank. This is a recognition vs recall problem. You know it, you just can't recall it, but if you saw it again, it would come back to you.

As you read content where it all makes sense, you assume you'll remember it. Your feeling in the moment doesn't give you the urgency to capture the information for future use. It's only when you try to recall what you read in the past do you realise that you just can't remember it. This is called passive consumption.

With active consumption, you create notes on what you learn. Now when you want to recall it, you can look it up. When you write your notes in your own words, you improve your ability to recall the information again.

A great knowledge system is optimised for your ability to recall information from it at a later date. Otherwise you're just creating an archival system and not a thinking system.

*“Your mind is for having ideas, not holding them.” – David Allen*

## The different types of note-taking

The knowledge system this book is about is the Zettelkasten method. We'll go into more detail about its concepts and how it works, then see examples of how to apply it.

It's however important to mention other types of note-taking methods and how they are different to the Zettelkasten method.

## The 5 categories of note-taking methods

Each of the different note-taking methods can be summarised into the following approaches.

- **Capture focused**—Do they aim to capture the material? For example with the Charting, Sentence, Mind Mapping and Outline method, along with Bullet Journaling and Daily Notes.
- **Organisation**—Does it help you organise your information and related concepts? For example with Flow and Box note-taking.
- **Summarisation**—Do they aim to distil the information? For example with the Cornell or DaVinci method.
- **Understanding**—Can you understand the information in its simplest form? For example the Feynman Technique and the SQ3R method.
- **Thinking**—Does it enable you to have original thoughts and insights? This is what the Zettelkasten method solves.

## **Capture focused note-taking**

### **Outline method**

Your notes are a series of hierarchical bullet points. This is referred to as an outline. The benefit of this method is that you can collapse the bullet points to get a helicopter view of your notes, then expand the bullets to get a detailed view.

### **Charting method**

This method allows you to list multiple topics on your page as rows in a table. Then on the columns you can track things like the advantages, disadvantages and when you should use it.

You can then make notes on multiple topics at the same time by filling out the relevant cells on the grid as they are discussed.

### **Sentence method**

This method aims to capture the main details of a talk. It's similar to highlighting a book where you capture the key sentences that are relevant to your learning. What you end up with is a condensed version of the original material.

This method is very useful to capture fleeting notes for topics that are happening in real-time when you don't have the time to properly think about them.

### **Mind Mapping**

Similar to outlining, your ideas and notes are captured as nodes on a mind map. Each node can have children nodes which can express more detail on the key point.

## **Bullet Journaling**

Similar to outlining, the Bullet Journaling method is where you use bullet points to capture your thoughts, tasks, insights and details. It is a mixture of task management and knowledge management.

## **Daily Notes**

Daily Notes help you create the routine of note-taking. You can mix this with something like Bullet Journaling where every day you capture your fleeting thoughts and priorities to help you focus the day.

## **Organisation based note-taking**

### **Flow method**

This method is designed to help you learn while you're consuming the source material, including creating notes within a class lecture.

Rather than transcribing the source material, you use arrows to indicate the flow of information to connect the concepts together. You write your notes in your own words, add diagrams for visual references and make connections between concepts.

### **Box method**

This is a digital first note-taking method which uses boxes to separate out the topics from the source material. This makes it easy to review later on and is great for visual learners as each box can be accompanied by a small doodle or diagram. It's not easy to do during live learning and is usually done by creating a more aesthetically pleasing set of notes when time permits.

## **Summarisation based note-taking**

### **Cornell System**

This note-taking method is where the page is split up into two columns (30% and 70%) with a header and footer.

The header will be the title of the topic.

The 30% left column will be where you store your keywords and questions.

The main 70% on the right column will be where you make your main notes and key thoughts.

The footer is where you summarise your notes making it ideal for revision exercises.

### **DaVinci method**

This is very similar to the Cornell System but it includes more doodles and illustrations of the topic.

## **Understanding based note-taking**

### **Feynman Technique**

Not strictly a note-taking method, the Feynman Technique is based on the principle that if you cannot explain it simply, then you do not understand it. Your goal is to simplify your notes by removing jargon words, complicated sentences and confusing concepts. You review your notes by asking whether a 12 year old could understand it. If not, you keep simplifying it.

### **SQ3R method**

This refers to Survey, Question, Read, Recite and Review. This is commonly used when reading material such as text books. It is quite

## THE DIFFERENT TYPES OF NOTE-TAKING

an active form of note-taking where you have to properly survey the source material. You start by scanning the material to orient yourself with the subject. It gives you a feel for what type of information it holds and the questions it can help answer.

As you then read the material in more depth, you aim to use the material to answer the questions you have.

The goal is to be able to recite the information and confirm your understanding through a review process.

There are extensions to SQ3R with SQ4R and SQ5R which add additional steps in the method.

## **Thinking based note-taking**

### **The Zettelkasten note-taking method**

The Zettelkasten method is a free flowing note-taking system that can be adapted to suit your individual preferences. It consists of writing atomic notes and a workflow that helps move these notes through the system.

These atomic notes can be ever changing and added to over time. It is a form of collecting ideas and information. As a note-taking system, it is not like what we experienced in school where we try to create a condensed version of the source material. Instead, it is a way to map understanding to how our mind works.

The Zettelkasten method is the primary focus of this book. It provides a framework of which you can consume your source material, organise notes, connect ideas and generate original thought.

It is possible to mix some of the other note-taking methods with the Zettelkasten method. For example, outlining is a very popular method to use with the Zettelkasten. As you start to explore the Zettelkasten method, you might choose to blend your approach to create a workflow that best suits your needs.

Zettelkasten is unique to other forms of note-taking because it allows you to connect ideas together. It's a map where anything can relate to anything. Other note-taking methods are usually a way to present information of a single topic, not consider the information in the system as a whole.

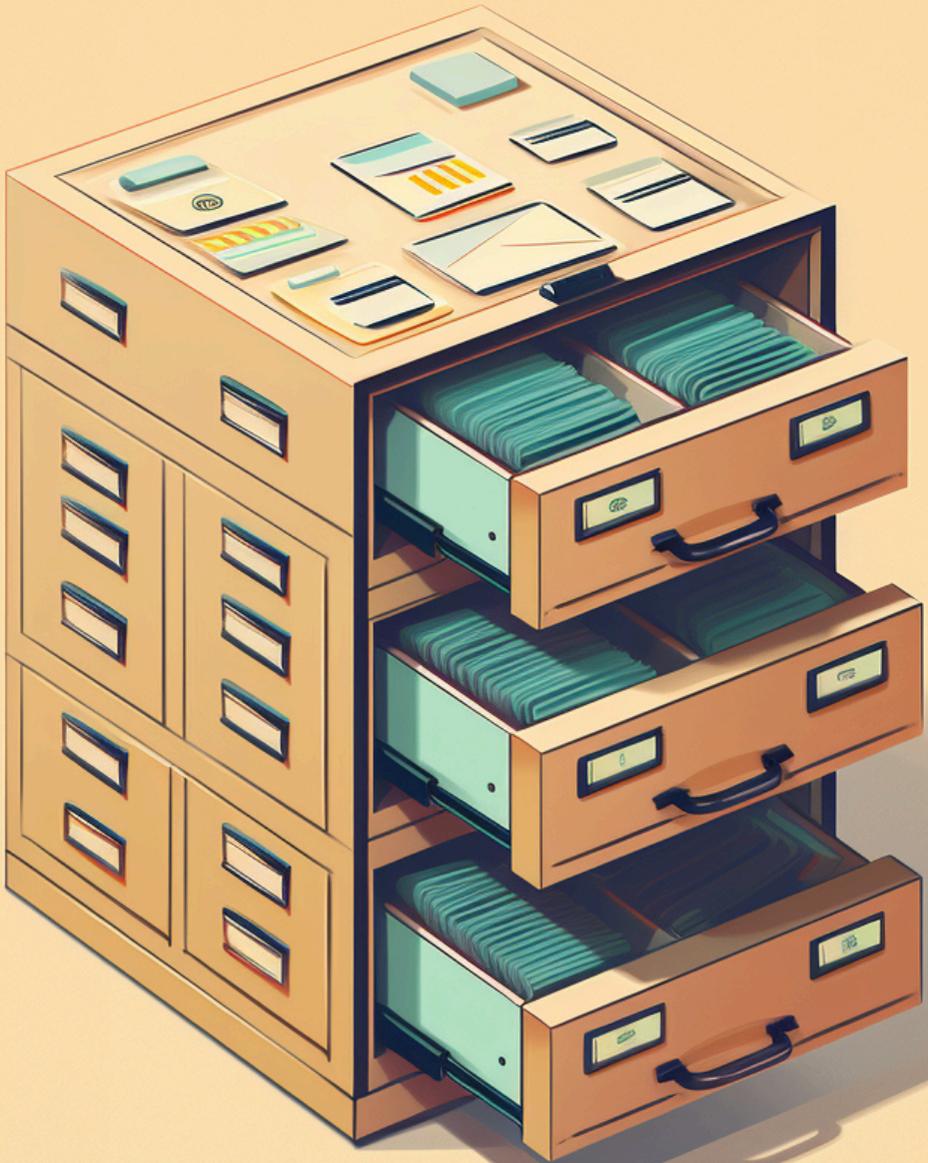
You may see this referred to the following names:

- **Atomic Note-Taking**—This is the name of this book and is more accessible than using the German word Zettelkasten to non-German speakers. It highlights the atomic nature of note-taking and its emergent properties that great structures are derived from its atomic parts.
- **Smart Notes**—This is another name for the Zettelkasten method and has been popularised by the book *How to Take Smart Notes* by Sönke Ahrens.
- **Second Brain**—You may hear of the Zettelkasten method being referred to as a 'Second Brain'. This really just refers to the externalisation of your thinking into your note-taking system so you are free to have ideas but not store them in your head.

### **Building a Second Brain**

It is worth noting that you may discover the concept of Building a Second Brain (BASB). This is the product of Tiago Forte. It's a technique of organising your work using the PARA method. PARA meaning Projects, Areas, Resources and Archive. If you're a knowledge worker, this is a great method of organising both ongoing projects, but also areas of interest.

However, unlike the Zettelkasten, it doesn't directly solve the issue of how to extract and organise knowledge from source materials to create original thinking.



# **PART 2 THE ZETTELKASTEN METHOD**

## What is the Zettelkasten?

Imagine you're living in a pre-computer era. You're passionate about many subjects ranging from economy to love. You have a deep interest in these topics and you want to find the secrets they hold. You want to develop new ideas. Ideas that you can share with the world.

To do this, you need a system. A system where you can organise your thoughts. A system that helps you think. A system where you can connect ideas together. A system that helps you discover new and innovative solutions to deep questions. A system that makes it effortless to distil ideas into something you're excited to publish.

Without the help of digital aids, you are armed with a pile of 6" x 4" blank index cards, a filing cabinet and a pen.

Your name is Niklas Luhmann—a 25 year old German sociologist—who in 1952 created such a system we now refer to as the Zettelkasten. Luhmann went on to write more than 70 books and nearly 400 scholarly articles. The subjects of his work range from law, economy, and politics—to—art, religion, and love. Even after his death, others were able to use his note-taking system to publish new works.



The Zettelkasten is a German word that means “slip box” (or “note box”). At its simplest, this is the technique of storing your notes in an organised way. Notes would be numbered in a sequence (often referred to as the Folgezettel). Notes in a sequence can be branched off into tangent ideas. Interesting connections between any two notes can be added by a reference from one note to another.

## The main benefits

There are a variety of benefits to the Zettelkasten note-taking system over more traditional note-taking methods.

These can be summarised as follows:

- **A bottom up approach**—original ideas emerge from the connections you make creating new insights and understanding
- **Clarify your understanding**—by writing simply, you iterate and improve your level of understanding
- **Perform deep thinking**—by considering each note’s implication to other notes, you perform a deeper level of thinking
- **Pass through your own filter**—as you’re not simply copying the source material, each note passes through your own thinking to ensure it’s relevant, understandable and useful
- **Easy to refresh your understanding**—the atomic nature of each note means you can quickly recall its contents
- **Assemble projects**—create a first draft of any project by assembling an outline from existing atomic notes
- **Ask questions**—find gaps in your understanding by asking new questions and see which atomic notes can help provide the answer

## WHAT IS THE ZETTELKASTEN?

- **Provides a workflow**—it helps you go through the process of capturing, understanding, organising, all the way to developing new insights
- **Emergence of structure**—as you add more notes, you'll be able to see which ideas are clustering together

## Zettelkasten versus The Commonplace

An alternative to the Zettelkasten could be the Commonplace. The Commonplace has been around since the 1600's and is a way to compile knowledge and inspiration into a single book. It's been used by many authors where they would collect their inspiration and knowledge in a single place. They would then use it as a reference when writing a new book.

The Zettelkasten differs in that it doesn't just compile knowledge, but allows you to create a whole sphere of understanding. You get to 'think' as you go through the process of writing, questioning, and linking your notes.

# THE COMMONPLACE

A COMMONPLACE MIGHT BE A  
COLLECTION OF NOTES, PHOTOS,  
DOCUMENTS, ETC



OR IT COULD BE A BOOK WHERE EVERYTHING  
IS COLLATED CONTAINING IDEAS,  
REFERENCES, QUOTES, ETC

## Zettelkasten concepts

The Zettelkasten method consists of two main parts:

1. **The system**—how to represent, organise, link, and store your notes
2. **The workflow**—how to add and maintain notes within the system through a defined way of working

Within the system, there are three primary note types:

1. **Fleeting notes**—these are your quick ideas and things you want to capture such as book highlights, quotes, etc. They can also be the raw notes from any material you consume before you have the chance to really think about it.
2. **Literature notes**—these are your atomic notes derived from your fleeting notes on a given source material. Each set of literature notes will be scoped to the specific source material, for example a single book or a video course.
3. **Permanent notes**—These are your master set of atomic notes which now cover all material you've consumed and any ideas you've added. As you process your literature notes to create permanent notes, you will now consider the wider impact the notes have in the context of your whole set of permanent notes.

# THE ZETTELKASTEN WORKFLOW

FLEETING NOTES ARE YOUR CAPTURED BOOK HIGHLIGHTS, VIDEOT NOTES, CLASS NOTES, QUOTES, SOCIAL MEDIA POSTS, IDEAS AND THOUGHTS



*The happiness of your life depends upon the quality of your thoughts*  
—Marcus Aurelius

CONVERT YOUR FLEETING NOTES TO ATOMIC LITERATURE NOTES



EACH NOTE HAS ONE KEY IDEA FROM THE SOURCE MATERIAL



MERGE YOUR LITERATURE NOTES INTO THE SLIP BOX AS PERMANENT NOTES



COMPARE THEM WITH EXISTING NOTES TO UPDATE AND ADD CONNECTIONS



It is worth mentioning that my use of literature notes might differ from other teachings around the Zettelkasten system. Some will refer to fleeting notes as the temporary ideas you have, and literature notes as the notes you make directly from reading books or other material.

During my exploration of the Zettelkasten, I have found that my preferred method of working is to create fleeting notes first from books and other material, and then convert these to literature notes as a secondary action.

It's not to say that any approach is wrong. I just wanted to point out the difference to avoid any confusion if you have looked at any other explanations of the Zettelkasten method.

## The Zettelkasten system

Each note in your Zettelkasten should be atomic. This means you should aim for one single idea in each note.

**Wait, just one single idea?** Yep. The motivation behind it is relatively simple. The simpler the idea, the easier it is for you to reason about, recall, link to, and reuse in any new projects.

It's important to note that a single idea doesn't just mean a single sentence. It can be multiple paragraphs containing an explanation from different perspectives, a counter argument, questions to think about or include examples of how to use it. But the whole note is really one core idea with supporting information to help explain it.

Let's take a simple example. You're learning about critical thinking and you want to include a definition in your notes. This may be useful if you need to introduce what critical thinking is in a blog post, or maybe you simply want to remind yourself in the future.

## Critical thinking

Critical thinking is about making informed and considered decisions by using objective analysis and evaluations.

So what's included in this note:

- **A title**—there is a simple title. In this case, it is a top level definition of what critical thinking is.
- **The contents**—in this example, it's a brief description of the topic critical thinking. The contents can of course be a range of things. We'll cover this in more detail later.

Next you want to create additional notes around the topic of critical thinking. You'll start to feel that they build on each other. This is where you can consider them to be a sequence.

In traditional note-taking, these additional notes would usually be stored in one larger document and potentially placed under different sub headings. The goal we're trying to achieve is not to have large documents, but rather break things up into their atomic parts. This is how we can achieve the 'Zettelkasten magic' by linking notes together and thinking more deeply about these individual parts.

Personally, I like to refer to these note sequences as continuation notes. While they are indeed a sequence, referring to them as a continuation allows us to understand that the ideas contained within the notes actually relate and build on each other.

Expanding the example of critical thinking, we might continue from the definition note to include notes about the techniques, benefits and even origin. The result is a set of atomic notes within our note-taking system organised in a sequence.

## THE ZETTELKASTEN SYSTEM

**Judging on your own merit**

Critical thinking is to remove the bias by

judg  
back  
infor

**Critical thinking techniques**

You want to carefully consider your approach.

The  
findi  
aggr  
hard

**Benefits of critical thinking**

Critical thinking helps you make informed

dec  
dec  
well  
why

**The origin of critical thinking**

Can be traced back to the teachings of Socrates through the use of Socratic questioning. He would challenge his students to examine every idea and that no-one in a position of authority was above question.

ADDITIONAL IDEAS ARE  
GIVEN THEIR OWN  
NOTE AND ADDED TO  
THE SEQUENCE

At the moment though, all we really have is a collection of atomic notes. They aren't numbered so you don't know the sequence. They aren't linked to each other either, so we don't know how they relate.

If this was an analogue Zettelkasten where you're making notes on physical note cards, you could shuffle cards and the sequence would be lost. The equivalent in a digital Zettelkasten might be to store them as files in a folder, but lose any sense of a sequence.

We'll cover numbering your notes and linking notes together in further detail later. Right now, just get a feel for how you can take a topic and break it down into atomic ideas.

## **Really! Only one idea on a note?**

By having your notes atomically written with just a single idea, it means you can pull that note out in isolation and still have it still make sense without a lot of thinking. Sure, it might refer to things that need further explanation, but the note—the core idea—should be easy to understand.

This means it shouldn't be ambiguous where its meaning could be interpreted in different ways. It shouldn't use complicated language or sentence structure. It should be easy to scan with your eyes. It should express a clear idea and not something that contradicts itself.

Let's use a practical example of why having all your notes stored atomically is beneficial.

Assume you have a slip box full of atomic notes about critical thinking. In addition you also have atomic notes on the related topic, the socratic questioning technique. Critical thinking being the method used for objective analysis and evaluations, and the socratic questioning technique being the method of gaining understanding through asking questions.

Now, you pick up a new book about mindset and discover the concept of a fixed mindset and a growth mindset. As you read this book, you recall that you had some notes on the socratic questioning technique which you think might be useful to refer to. You wonder whether this technique might be problematic if used in discussion with someone with a fixed mindset: Will they get angry? Will they listen? How can you tell if someone has a fixed mindset before engaging in a socratic discussion?

As these ideas race around your head, you want to pull your thinking together to consider if they have any merit or not. So, you start by reminding yourself of the socratic questioning technique.

You pull the permanent notes out of your slip box to see which ones jump out. You scan them quickly to consider if they are relevant. You can only really do this if they are written atomically.

By having your notes written atomically, you can pinpoint the exact ideas that are directly relevant. For example, you may have a note titled “The Socratic Method: The reasons for opposition”. It becomes easy to find because you don’t have to read through pages of notes in a single document only to find it buried near the end.

By being able to combine these two ideas together, you end up with a new idea which you could title “Fixed Mindset and Reasons for Opposition using the Socratic Method”. You get to see the existing note on the socratic method through a new lens of the fixed mindset. You get to think deeply about the connection.

The alternative approach would be to write longer documents containing all your notes. You simply don’t have time to read through it, let alone figure out how to link to just the bit you need. You’d be tempted to copy and paste the section you want out of the note and into your new note. Doing so means you’re duplicating your work making it harder to track what to update should your understanding on the topic change.

Having a single idea on a note means it’s easy to find, easy to recap what it means, easy to update and easy to link to. This is why we recommend one idea per note.

## **How to convert a long note to atomic notes**

Let’s compare this with traditional note-taking. Assume you have a master note called “Critical Thinking”. It uses the outline method and is contained in a single document. This is actually how I write my fleeting notes. You could argue that traditional note-taking stops at the fleeting notes, and the Zettelkasten starts at the knowledge processing phase.

## Critical thinking



Introduction:

- You do not have the time or energy to challenge the status quo
- You know you will face opposition from other people
- Therefore, you end up making a solid plan. But one which will not make too many waves or provide the necessary change.
- The skills honed in critical thought will give you the foresight to predict and prepare in advance for time—wasting problems. Nothing saves more time than getting things right the first time.
  - Critical thinking is about making informed and considered decisions to minimise the risk of making bad decisions

What is Critical Thinking:

- Socrates had taught many of the youngest and brightest to question all assumptions
  - There are those who don't like being questioned. Is that because it threatens their power, or their belief system is overriding the desire to have discourse on the subject?
- Socrates told his students to examine every idea on its merits alone
  - I'm curious about the 'on its merits alone'. Is this something we fail to do today when we consume information and options? Are we failing to spot the flaws because it's loaded with opinion?
- He insisted that the ideas dispensed by people in positions of authority were not above question

When you write each note atomically, start to think about whether you really understand it. You do this by rewriting it in your own words. You get to write it like you're teaching someone else who isn't you. The old saying, "the best way to learn is to teach it" really applies here.

And even if you're not going to share your notes with others, you have to remember that it might be six months later before you read it again. The version of you in six months time will be consumed by many different ideas. So when you read it back in the future, you'll be reading it from a fresh new perspective.

The following illustrates how this longer document can be broken into its atomic counterparts.

### **Critical thinking**

Critical thinking is about making informed and considered decisions by using objective analysis and evaluations.

### **Opposition to critical thinking**

You may face opposition from other people when critically assessing their work or statements.

### **Judge things on their own merits**

Critical thinking is to remove the bias by judging it on its own merit. You want to strip back the opinion, speculation and misleading information to assess it on its own.

For example:

"The government has improved the economy". You want to ask questions about what the definition of "improved" is and the time frame of which it's measured. How are the statistics gathered and what information has been omitted in the assessment.

# ATOMIC NOTES

## Reasons for opposing critical thinking

The opposition of critical thinking can be because it threatens their power or belief system. They may resort to shutting down any further discussion, or attempt to control the narrative by making straw man arguments to weaken your ability to critique their perspective.

## Straw man argument

Straw man argument

A straw man argument is where you intentionally misrepresent an argument and exaggerate it so that it is easy to defeat.

For example:

You may be discussing whether to introduce a late fee for returning books to a library. Your opponent may respond with “that’s punishing those who are slow readers and denying them an education”.

## Critical thinking techniques

You want to carefully consider your approach. The goal is to have the least resistance to finding out the truth. If you do this too aggressively then your opponent will make it harder to get a straight answer. Make a plan of how to approach the topic and aim to not make too many waves. You want a gentle persuasion to dig deeper, so don’t rush it.

## Benefits of critical thinking

Critical thinking helps you make informed decisions and minimise the risk of bad decisions. This means you need to provide a well reasoned and evidence based approach to why one decision is favourable over another.

## The origin of critical thinking

Can be traced back to the teachings of Socrates through the use of Socratic questioning. He would challenge his students to examine

This example raises a few questions however. We'll go into more detail in the following chapters, but to illustrate what you should be thinking right now, here's an overview:

1. How do you title your notes?
2. How do you give your notes a theme—such as 'Critical Thinking' in this example?
3. How do you link notes together?
4. When do you link notes together?

But before we get there, I want to explain the overall workflow of the Zettelkasten. This will help you understand the bigger picture before focusing on the details.

## **The Zettelkasten workflow**

One of the unique advantages of the Zettelkasten note-taking system is that it has a workflow that guides how knowledge moves into the system. You start with fleeting notes, expand these to literature notes, and then process them to permanent notes.

# FLEETING, LITERATURE AND PERMANENT NOTE WORKFLOW

①  
CREATE CONDENSED FLEETING  
NOTES WHEN READING



②  
CREATE ATOMIC LITERATURE  
NOTES FROM THE DAY'S READING



③  
CREATE NEW OR UPDATED  
PERMANENT NOTES



④  
CONSIDER EXISTING  
PERMANENT NOTES



⑤  
NOTES ARE STORED IN A SLIP BOX  
(ZETTELKASTEN IN GERMAN)



## Fleeting notes

Fleeting notes are your temporary ideas before they have been fully refined. These could be simple thoughts you want to capture, daily notes, social media posts you've seen or quotes from a book. If you're familiar with shower thoughts—those random fleeting ideas that spark a moment of true inspiration often had when taking a shower—those are fleeting notes as they evaporate just as quickly as they come.

I also consider the raw notes I take when reading a book or watching a video to be fleeting notes. I'm simply capturing what is relevant, adding my own fleeting thoughts and moving on. I'm not thinking too deeply about the subject matter at this stage.

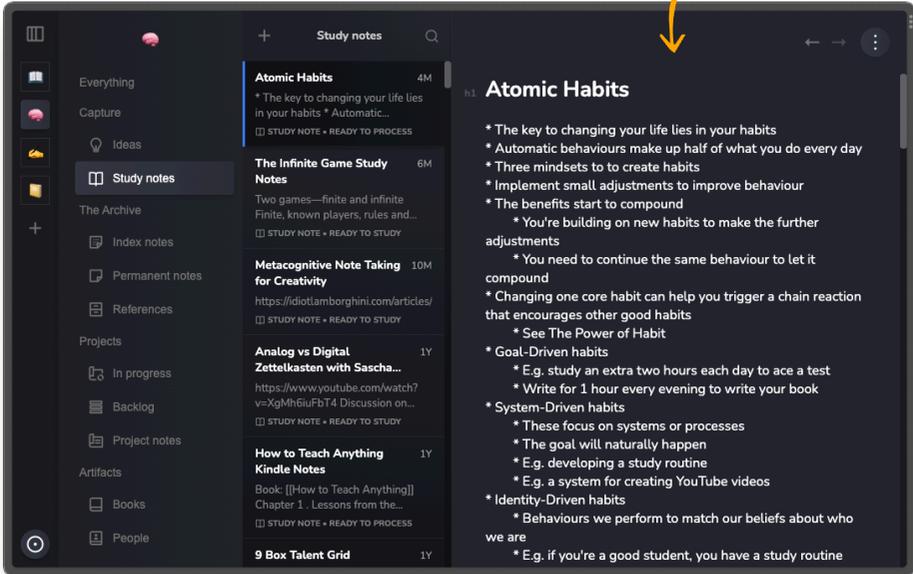
Fleeting notes should be short lived. They exist to capture the idea in the moment. They should not be used as a way to store ideas or be used as a reference. They can end up unorganised and chaotic and finding what you need when you need it is near impossible.

It's reasonable to assume that a lot of people who take notes but haven't really considered note-taking as a skill, end up collecting lots of fleeting notes that sit there gaining digital dust in their notes app of choice. I too am guilty of this.

We often make notes from a video course, make highlights from the Kindle app or create handwritten notes in a lecture. These are the raw fleeting notes where you've captured the information as it's presented with a quick decision to determine if it is useful or relevant.

What's important to mention here is that your fleeting notes are a quick capture of what's important to you. You distil the information to just the useful parts, such as in a bullet point list, but with enough information to allow you to write what it means in your own words at a later time.

Once you have your fleeting notes, it's time to start processing these into literature notes.



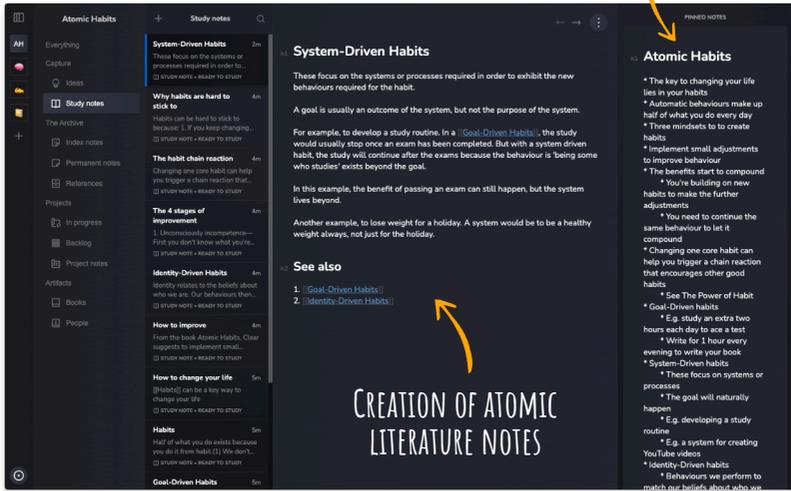
## Literature notes

Imagine you've read a book and you have a lot of highlights, quotes, questions, ideas, and thoughts. These are your fleeting notes that you've captured from the book.

Now you want to organise your understanding. You can think of this like writing a book summary. A condensed version of the book that makes sense to you.

Your goal is to use these fleeting notes to create a collection of atomic literature notes that show you understand the subject without having to refer back to the original book.

To do this, you create a sequence of notes, where each note expresses one single idea from the book.



Each note you create might contain a definition, example, opinion, conflict, idea or question.

## Avoid confirmation bias

The idea that literature notes are created from fleeting notes, and being scoped only to the source material may differ from other approaches to the Zettelkasten method. Personally, I like the idea that you first create fleeting notes from the books you read, then literature notes. I also like the idea that your literature notes are a self contained set of atomic notes just for that source material.

The reason to scope the literature notes to the source material is to avoid having any bias from any previous material you've studied. You want to assess the new material for its merits alone and not make judgements too quickly.

To give you an analogy, imagine you're studying the subject of wizardry. You first read Harry Potter and try to understand the magical system, abilities, and the role and influence wizards have. You make your literature notes exploring these concepts and your understanding around it.



Later, you read *The Lord of the Rings* to continue your study of wizardry. But you find yourself looking at wizardry through the lens of Harry Potter as that's what you know. You keep finding differences and conflicts making it harder to reason about. It's time consuming and clouds your judgement.

In some cases, you may find that you desire seeing the world through a Harry Potter lens. Your earlier exposure and familiarity makes it your favourite and you're trying to find the information that proves Harry Potter's perspective of wizardry, and not *The Lord of the Rings*. You start to dismiss information that doesn't agree with this. You suffer a confirmation bias and miss out on properly seeing *The Lord of the Rings* for what it truly is.

To overcome this, when you study *The Lord of the Rings*, write your literature notes only from the perspective of *The Lord of the Rings* and pretend that Harry Potter doesn't exist. This frees your mind to consider it exactly as it is. It doesn't matter if it conflicts with Harry Potter. You want to consider that either book might have the better representation of wizardry.

Later, you will create your permanent notes from these literature notes. Only then do you compare and contrast the differences and similarities between the different ideologies. Both ideologies should have equal weight in your mind and should not be unfairly influenced by any cognitive bias you had when making the notes.

This is why I propose that fleeting notes and literature notes are made in the context of the material they come from. Yes, that includes writing atomic literature notes to fully explore your understanding without a clouded judgement. It helps reduce the bias you will naturally have and give you a truer perspective of material.

## Asking questions in your literature notes

Sometimes you will find it hard to write a literature note because the material just didn't make sense. In this case, either go back to the source material to try to seek an answer, or create an atomic note highlighting what it is you don't understand. This provides an opportunity for you to have open questions in your Zettelkasten that research from other sources might be able to answer.

Other times, you may perfectly understand the material you're making literature notes about, but think of questions to expand your thinking to explore new directions.

One method to track your questions would be to create a note that lists all the open questions you have on the subject.

### Open questions about habits

1. [\[How do you create habits?\]](#)
2. [\[What causes you to break habits?\]](#)
3. [\[How did James Clear learn the science behind habits?\]](#)
4. [\[Why do you we stop performing our desired habits?\]](#)
5. [\[What emotional states prevent sticking to habits?\]](#)
6. [\[What does failing a habit do to our emotional state?\]](#)



EACH QUESTION CAN LINK TO A NEW ATOMIC NOTE WHERE YOU CAN CAPTURE THE QUESTION AND ANSWER

Any of these questions can be converted into their own atomic notes. A question note can outline what the question is, why it's important to you, and any links to any other notes that are impacted when you discover the answer later.

## What causes you to break habits?

I want to know the reasons you might end up breaking your habits. Knowing this can help you identify patterns or weak points in your system, ultimately leading to a habit failure.

Could you use a pre-mortem of your system to test out where you will fail? For example, if you are planning a weight loss diet, then you might identify where stress or social events could be breaking points.

### See also

1. [\[\[Why habits are hard to stick to\]\]](#)

We'll cover what to do with these questions later on when processing these literature notes into permanent notes.

## Referencing the source material

When creating your literature notes, you should consider the importance of referencing the source material that contributed to the note's contents. This allows you to refer back to the source should you need to clarify something or cite a reference.

There are different approaches to referencing, which we will cover later. If you're making factual statements in your published work, it's important to be able to cite your sources. Without clear references, you'll lose the integrity of your notes. This makes it harder to re-evaluate or defend your thinking in the future.

Once you have your completed literature notes, you're ready to start converting these to permanent notes and store them in your slip box.

## Permanent notes

Your slip box is a large collection of atomic notes. Slip box notes are called permanent notes. These notes are the most recent representation of your understanding and are interconnected with notes that are related.

To create permanent notes, you base them off your literature notes. This means you pick up a set of literature notes you haven't already processed, go through them one by one, and add it to your slip box as a permanent note.

At first it may feel that you're just copying your literature notes and placing the copies in your slip box and calling them permanent notes. However, as you build up more and more permanent notes, every new literature note you process is to be considered in the context of the whole slip box.

I like to think of a note as a single idea that it expresses. So when you process a literature note, you need to consider if the idea expressed is brand new to your slip box, or if you have covered it elsewhere. You start to ask, "Do I already have this idea?", or "What notes do I have that this idea relates to?"

If the idea is new, add it as a new permanent note in your slip box. However, if the idea has already been covered, you must now consider if you need to make any changes to the notes in your slip box, or if it is already covered. Those changes might be to add more clarity to the idea, or to counter argue the idea if you now have opposing information.

The goal of processing literature notes into your permanent notes is not to copy the notes as they are, but to merge the ideas they convey.

As you process these ideas into your slip box, also think about which notes you can relate it to. Think of this process like learning a new skill, for example filmmaking. Every new idea that you learn, you can relate it to knowledge you already have. This might be knowledge

about photography such as lenses, shutter speed, and aperture. Or it might be about storytelling such as writing, acting, and dialogue.

If you imagine your slip box as your externalised thinking system, then consider adding permanent notes as a way to upgrade your thinking.

## **How to process a literature note into a new permanent note**

You may be wondering what you do with your literature notes. Do you edit them and turn them into permanent notes? Or do you make a copy and add permanent notes as new notes?

Personally, I like to take a copy as it leaves the original literature note intact. This is helpful if I want to refer back to the source material in the future. Sometimes I may have misunderstood something or I need to clarify it further. Being able to trace my steps back to the source material helps me find the original information for me to review again.

When you're finished with the literature note, you can then archive it to indicate that it has been processed.

By making a copy, it means you can continue to make modifications to the permanent notes from other sources of information. This lets you evolve your thinking in your permanent notes, but keep your literature notes in their original form.

## **Reference your literature note**

You never know when your ideas may be challenged in the future. It's frustrating when you lose sight of how you came up with your ideas and who was the catalyst that sparked them. This can be solved by making sure your permanent notes reference the literature notes they were based on.

In your permanent note, create a 'References' section and add any links to the literature notes that helped you write the permanent notes. If you ever need to cite a source or revisit the original material for clarification, you can follow these references and get the information you need.

## **An example permanent note**

### **Arrival Fallacy**

We often set arbitrary goals for us to achieve. This might be to pass an exam, or to lose weight for a wedding. However, once you reach those goals, you find that there is nothing further to strive for. The goal is complete. You have arrived. And your motivation to continue the habits that achieved this goal go away.

This is known as the Arrival Fallacy. You believe that happiness will be when you arrive at your goal. But happiness often fades quickly after the goal has been achieved.

So you end up changing to new goals. You end up needing to make new habits. This constant flux of different goals makes it harder to build your [\[\[Identity-Driven Habits\]\]](#) around what you do and to have robust set of [\[\[System-Driven Habits\]\]](#).

Without a long running set of goals, you can end up feeling aimless, unmotivated and frustrated.

### **See also**

1. [\[\[Why habits are hard to stick to\]\]](#)

### **References**

1. [\[\[Literature Notes/Arrival Fallacy\]\]](#)

In this example, the permanent note describes the concept of arrival fallacy. It includes a couple of examples when someone can experience it. It also links to other concepts, such as identity driven habits and system driven habits.

The note includes a ‘See also’ section to aid the discovery of related ideas. The references section includes a link to the literature note for where it was derived.

## **Does the new note contradict what’s already in your slip box?**

When adding a new note, consider whether it contradicts any previously created permanent notes.

For example, let’s say you’re researching the Ketogenic diet and you’re adding a note titled “High cholesterol from a high fat diet does not raise risk of heart disease”. You might have been researching other information previously which suggests that “High cholesterol can cause heart disease”.

You have contradictory information, which needs to be resolved if you want your thinking to be complete. Assess whether any existing notes are invalidated with the new information.

If you are unable to resolve the contradiction, then create a new permanent note with your thoughts on the two. You might conclude that there is insufficient information to resolve the conflict and more research is required.

## **Does the new note duplicate what’s already in your slip box?**

Often you need to consider whether the new note is adding anything new. You might have already covered it in a previous permanent note. Try to avoid repetition where the same information exists in different notes. If you don’t do this, you’ll have fragmentation when you link

the notes together as there won't be a single definitive note capturing the idea.

If the new note improves on what you already have in your slip box but doesn't justify having its own permanent note, update the existing permanent note. Make the necessary changes and add an additional reference pointing to the literature note that inspired the changes.

## **What do you do about question literature notes?**

During the creation of your literature notes, you may have recorded some questions that you want to explore and try to answer.

Now is the time to consider each question to see if you can find a meaningful answer from your entire set of permanent notes. To do this, start by gathering together the notes that are potentially relevant and then see if they are useful to help find an answer.

An example might be notes you have on how the body responds to stress. In your literature notes, you may discover that the part of the brain called the amygdala is responsible for processing emotions and memories associated with fear. When you created your literature notes, you may have thought about its relationship to imposter syndrome.

When you now process your literature notes into permanent notes, you find this question:

*“Is imposter syndrome a form of stress and is the amygdala responsible for triggering it?”*

To try and answer this question, you can look for any existing notes you have about the amygdala, imposter syndrome and emotional triggers. You can review these notes with a goal in mind: “How does this relate to stress and the processing of emotions and fear?”

You might conclude that imposter syndrome may be a fear where negative emotional memories are associated with it. You may consider that stressful situations can trigger these memories and create the sensation of imposter syndrome. You may even conclude that imposter syndrome is an anxiety that causes stress but isn't a symptom of stress. This anxiety could be triggered by some other non-obvious factors.

You're left with a hypothesis. It opens up the pathway for more research on the subject. You might even consider how you could conduct your own research to seek a more complete answer. You can start to consider what would help prove or disprove this theory.

Often though, your questions will highlight the gaps in your understanding. This is where you can look for new material to research such as books or journals. As you study this new material, these questions will help you scan for information that can help provide an answer. This gives your research a goal, making it easier and more enjoyable to read.

If you don't create open questions and try to answer them, you will miss out. Many original and insightful ideas will remain completely undiscovered.

## The slip box

The slip box refers to the place where you store your permanent notes. In an analogue Zettelkasten, this would be a physical filing cabinet, where the notes would be numbered in a sequence and placed inside.



## MAP OF CONTENT (MOC)

In a digital Zettelkasten, we refer to the slip box as the place where you store your notes within your chosen note-taking application. These could be files in folders on your computer, or notes stored within an application database.

Unlike an analogue system, a digital system has the benefit of finding notes using search, hashtags or by clicking on links to other notes.

The simplest way to think about the slip box is that it is the place where your permanent notes are stored.

## Map of Content (MoC)

As you process your literature notes into permanent notes, your Zettelkasten will start to fill up. You may feel anxious that it's disorganised and that you're just throwing things in without any structure. How will you find the note you want to link to? How will you browse your notes to get inspiration? How will you make sure your notes aren't simply lost and forgotten about?

This is where Map of Content comes in. It allows you to bring order to the chaos. It's an addition to the original Zettelkasten and was created by Nick Milo from Linking Your Thinking. Its purpose is to solve the following two issues:

1. Organise your notes around a given topic or theme
2. Use it a working playground for exploring ideas around a given topic

While we may refer to the singular Map of Content, you will often create multiple Maps of Content. They will be used for different topic themes, or other purposes such as collecting the questions you may have.

## **Organising your notes with a Map of Content**

Let's say you want to organise your notes around the topic of "Mindset". You may have a range of permanent notes that capture your understanding and ideas. By creating a Map of Content, you can build up the hierarchical structure for those permanent notes. This provides a simple way to revisit the topic and explore the notes that are relevant.

As you add new permanent notes, scan through your Map of Content to see which notes are related. Consider if they need to be updated with new information, reassessed if your understanding has changed, or thought of in a different light as you may be thinking about it in a different way than before.

### **A Map of Content is hierarchical**

You can create your Map of Content in any shape you desire. One popular approach is to use the outline method to indent sub topics under parent topics.

You may use simple titles in the Map of Content to group the child notes together. However you may choose to turn that title into a permanent note itself. One example from the Mindset Map of Content in the following illustration is the "Attributes" title. While it has many child notes underneath, it also links to a note about "Growth Mindset Attributes".

By having this hierarchy, you can use it as a way to 'zoom in' or 'zoom out' on a given topic. For example, I could review what a "Growth Mindset Company" is at a high level, or zoom into the sub topic "Growth Mindset Managers".

Authors often signal a hierarchy within their books by how they organise the sections and chapters. You may want to use this as inspiration to help you organise your own Maps of Content.

# MAP OF CONTENT

HASHTAG TO INDICATE IT'S A MAP OF CONTENT

## Mindset

#moc

OUTLINE OF THE WHOLE TOPIC LINKING TO EACH ATOMIC NOTE

- [\[\[Determining Your Mindset\]\]](#)
- [\[\[Growth Mindset\]\]](#)
  - As individuals
    - [\[\[Growth Mindset Attributes\]\]](#)
      - [\[\[How Our Personality Develops\]\]](#)
      - [\[\[Growth Mindset Learning\]\]](#)
      - [\[\[The Power of Positive Thinking\]\]](#)
      - [\[\[Confidence\]\]](#)
      - [\[\[Depression\]\]](#)
    - Values
      - [\[\[Effort vs Outcome\]\]](#)
      - [\[\[Attitudes Towards Challenges\]\]](#)
    - Personal Development
      - [\[\[Self Awareness\]\]](#)
      - [\[\[Assessing Individual Performance\]\]](#)
      - [\[\[The Tortoise and the Hare\]\]](#)
  - [\[\[Fixed Mindset\]\]](#)
    - As individuals
      - Performance
        - [\[\[Fixed Mindset Attributes\]\]](#)
        - [\[\[Ego\]\]](#)
        - [\[\[Estimation of Our Abilities\]\]](#)
        - [\[\[The IQ Test\]\]](#)
        - [\[\[When Fixed Mindset People Thrive\]\]](#)
      - Failure
        - [\[\[Fear of Failure\]\]](#)
        - [\[\[The Emotions of Failure\]\]](#)
        - [\[\[Being Unsuccessful\]\]](#)
      - Values
        - [\[\[Non-Learners\]\]](#)
        - [\[\[Comparing Yourself to Others\]\]](#)
        - [\[\[How You View Yourself\]\]](#)
        - [\[\[Success Over Growth\]\]](#)

HIERARCHY TO GROUP CONCEPTS TOGETHER

HIGH LEVEL GROUPS CAN BE THEIR OWN ATOMIC NOTES

HIERARCHY CAN BE USED TO ZOOM OUT OR ZOOM IN ON THE DETAIL

# MAP OF CONTENT GRAPH VIEW



THE ABOVE SHOWS THE MAP OF CONTENT AS A GRAPH VIEW. EACH ATOMIC NOTE CAN BE VISUALISED THROUGH LINKS FROM THE MINDSET MOC.

The level of detail you narrow down to is personal preference. It all depends on how deep you want your understanding to go before it becomes irrelevant to your goals. One example might be notes about exercise, which in turn could reveal information about how the body responds to exercise. This could then reveal information about how individual cells respond to exercise. At this point you might conclude that you've gone too far. But if your research could benefit from that level of depth, go for it.

## Folders vs Maps of Content

Let's assume you're deciding how to organise your notes in a way that they are neatly categorised. One approach is to put them in folders within your note-taking application and use the folder name as the topic of what it contains. You may want to create individual folders for "Mindset" and "Business".

But what if you have a note that no longer fits one single folder? An example of this might be a note about Growth Mindset CEOs. Naturally, you would consider this to be part of your Mindset folder. However, you might also have a folder about Business. Which one do you file it under?

With folders, you struggle to know the best place to put it. You're torn between having to choose one over another. And you certainly don't want to duplicate it in both. But if you put it in one, such as the Mindset folder, you may miss out from discovering it when working on the Business folder.



The solution is simple. The Zettelkasten solves this by not enforcing rigid categorisation of notes. By using a Map of Content to represent different topics, you are free to add the same note to both.

## **Use a Map of Content as a playground for ideas**

You may find that you want to explore a new topic, but don't quite know what it will be about. You can create a Map of Content to outline your exploration of this topic.

Start by outlining what you think it will cover. This could be a bullet point list, or even a mind map. You're just getting a feel for what type of content it is about.

This becomes a prompt for new books and articles you can consider reading. As you start to add permanent notes on this topic, review your Map of Content and make the necessary changes to reorganise it and create links to the relevant notes.

The more you read around the subject, the better your understanding becomes. Your Map of Content will evolve from a loose and vague outline to something more comprehensive and complete.

# USING MAPS OF CONTENT FOR IDEATION

OUTLINE TOPICS THAT  
CAN BE EXPLORED IN  
MORE DETAIL

## Startups

#moc

### Definitions

- What is a startup?
- What is an entrepreneur?
- What is a solopreneur?

LINK TO ANY  
EXISTING  
PERMANENT NOTES  
YOU ALREADY HAVE

### Traits for success

- [\[\[Growth Mindset\]\]](#)
  - [\[\[Growth Mindset CEOs\]\]](#)
- Productivity habits
- Avoiding burnout
- Daily routines

STRUCTURE IT IN A  
WAY THAT FEELS RIGHT  
TO ORGANISE THE  
CONTENT

### Product success

- Product market fit
  - Understanding the idea
  - Reaching your customers
  - Understanding the problem
  - Understanding the solution
  - Elevator pitch
  - Customer validation
- Marketing
  - Landing page validation
  - Social media marketing
  - Content marketing
- Monetisation
- Retention
  - Habit forming behaviours
  - Network effect
- Data
  - Metrics
- Building the product

CONVERT THESE TO  
LINKS AS YOU CREATE  
THE RELATED NOTES

## **Index notes, Structure notes, and Maps of Content**

You may see some references to Index notes or Structure notes. They are essentially the same as Maps of Content. You can choose a naming style that best suits your preference.

Index notes are similar to an index in a book whereas structure notes refer to the entry point into a subject with a hierarchy. A Map of Content could take the form of either an index note or a structure note. Feel free to use which terminology that suits you best.

## **Connecting ideas**

The brain likes to relate information together through connections. Your notes should also be connected to each other. This means your understanding is not only achieved within an individual note, but also through the way in which your notes are connected.

An example would be to understand how artificial intelligence works by relating it to how the brain processes language. You might start to draw parallels between the two systems to see if they follow any patterns. As you discover any patterns, you can make these connections by adding links from one note to another. You can also add an idea note between two notes and write about how they are related.

You can make these connections by adding links from one note to another. You can also add an idea note between two notes and write about how they are related.

For example, I can create an idea note explaining how artificial intelligence can predict what to say when generating text, and how it is similar to the human brain predicting what words to say next when we speak. In both systems, the full sentence is generated word by word, and not formed in advance before speaking. This idea note can

link to a note about artificial intelligence and a note about the brain's language processing to complete the connection.

## **When to link notes**

Deciding when to link one note to another requires you to make some careful considerations. What note do you link to? Does the note exist, or do you need to create it? Does it add context or insight, or create noise in your system? The whole process can be rather subjective. To help you, here are a few ideas on when it's useful to link notes:

### **When the note assumes you know something**

Since notes are to be written atomically, you should be able to pick any note in your system and understand what it says. However, while it may make sense, it might refer to other information in the system that assumes you already know and understand. This is where it's useful to create a link to any notes that helps to clarify any assumptions that are made.

An example would be a note concluding the results of a peer-reviewed study. Linking to the study would provide context to help you understand what the study set out to discover and how it was conducted.

### **When the note gives you inspiration for divergent thinking**

Often when you make notes in your Zettelkasten, your mind starts to think more laterally about the topic and draw comparisons with other concepts. This is a great time to create a link to a note that articulates the connection.

For example, you're working on a note about the genetic encoding within DNA and how mutations can occur. While writing this, your mind starts to think laterally. You think of DNA as a medium to hold information. You think about different types of information that exist, such as storytelling. You think about how stories are passed down from generation to generation, and how they change subtly over the

years—how they mutate. That’s when you realise the parallel between the two concepts. Both DNA and stories mutate.

DNA contains the information that represents the genetic makeup of a living organism. Stories contain the information that represent the people, events and emotions. It’s the information that changes—mutates if you will—from generation to generation.

This is the moment you create a note about the “Mutations within Storytelling” and reference the “DNA Mutations” note you were previously working on.

This is the moment you create a note about the “Mutations within Storytelling” and reference the “DNA Mutations” note you were previously working on.

You can now start to ask new questions. How do these mutations happen? Is it because of errors introduced when the story is told again and again? Or is it because others wilfully adapt the information by changing characters or adding events—like creating a new offspring from the DNA of two parents?

I find this is one of the magical aspects of the Zettelkasten method. It encourages divergent thinking and provides a very lightweight mechanism to capture these ideas and develop them into something truly unique and truly special.

### **When you want to test a concept in different contexts**

As you write your notes you might come across an interesting concept. You can use this as an opportunity to try and apply this concept to different fields. It gives you a new lens to think about things in new ways.

For example, you may be writing about childhood memories and how, at a very young age, a child can remember an emotional experience, but not the reason behind it. This note might explain why a child gets

## Genetic Encoding using DNA

DNA encodes information through a four-letter alphabet: A, T, C, and G. These letters form sequences that serve as instructions for building and maintaining living organisms, determining traits, and passing on genetic information through generations.

## Causes of DNA Mutations

Mutations in DNA arise spontaneously during replication, influenced by factors like radiation, chemicals, and replication errors.

### See also:

1. [\[DNA Mutations\]](#)

# DIVERGENT THINKING

## DNA Mutations

Mutations in DNA between generations introduce genetic variations, driving evolution through natural selection.

### See also:

1. [\[\[Genetic Encoding using DNA\]\]](#)

AS YOU WRITE THE ABOVE NOTES, YOU MAY BE INSPIRED BY THE SIMILARITIES BETWEEN DNA MUTATIONS AND THE EVOLUTION OF STORIES THROUGH GENERATION TO GENERATION

## Mutations within Storytelling

Stories are told from generation to generation. They encode information, such as the characters, the events and the emotions experienced. As these stories are told between generations, they may mutate, much like how DNA can mutate the genetic information encoded within DNA between generations.

### See also:

1. [\[\[DNA Mutations\]\]](#)



upset in some situations, but can't tell you why—simply because they didn't store the memory of the cause.

When thinking of this concept, you can test it out on different subjects. For example, do pets exhibit the same traits? Do co-workers exhibit the same traits? Do machine learning algorithms exhibit the same traits?

You can jot these questions down in an idea note for you to think about and explore. It opens the door to seeing things in a new light and helps you become receptive to new information that might provide answers. These questions give you something to look out for as you study new material.

### **When a thought pops into your head**

As you write a note, an idea may spark in your mind for something to explore or consider more deeply. This is a great opportunity to create a new note jotting down your idea. Link back to what you were looking at that sparked the idea.

An example of this would be when you're making notes about meditation and how it can change your brain waves as you transcend different states. You might have an idea about whether this can impact your sleep's circadian rhythm by meditating at different times of the day. Simply create a fleeting note to capture this fleeting thought and link back to your mediation note.

I would try not to get too distracted by the many rabbit holes your mind wants to explore. Capture them as new fleeting notes and get back to what you were focusing on.

## **When not to link notes**

It's quite important to consider if creating a link can be a hindrance. These include:

### **When you keep linking to a core concept**

It may be tempting at first to link to the main parent topic so you can track notes that are based on it. For example, if I have a note about growth mindset, I could be tempted to keep linking to it every time I talk about growth mindset companies, growth mindset in education, changing from a fixed to a growth mindset, etc.

This creates noise in the relationships between my notes. As discussed earlier, it is better to create a Map of Content for the core topic—mindset in this example. Then link all the notes from this Map of Content.

The software you use to store your notes should be able to show you the backlinks so you know which Maps of Content a note exists within.

This leaves you free to only link to notes that are directly useful. One example might be a note about growth mindset in education, and linking to a note about growth mindset teachers. The relationship is tightly coupled and useful when using these notes within a project.

### **Automatically creating links**

It may be tempting to try and find a way to automatically create links between notes based on the content of your note. While this can be useful for looking at related content by keyword, it can be problematic if it is out of context. Sometimes the word may have different meanings depending on the context.

One such example might be the phrase “Working Memory”. In one context it could be about computers and memory usage, but in another it could be about cognitive load when studying.

Without knowing the meaning, a link could be made out of context.

Another reason to avoid automatically creating links is that it bypasses your own thinking. You start to delegate the job of thinking to a system and end up removing yourself from the process. This results in you having less awareness of what's in your system, and therefore are unable to fully comprehend or utilise it as you start considering new insights. It defeats the whole purpose.

You may think that having access to all the information at your fingertips is good enough. But remember, a lot of creative and deep thinking actually happens when you're away from your computer, such as taking walks, exercising or doing mundane chores. If you didn't pay attention to it when creating the notes, you'll struggle to think deeply about it at other times.

Another thing to watch out for is the onset of artificial intelligence finding its way into the software. Be mindful about whether it is doing the thinking for you, or is enhancing your thinking. We'll cover the role of AI in Part 6.

## **Intermediary notes**

When you create a permanent note, you want to start thinking more laterally about it. You want to look for opportunities to connect the note to existing concepts, or see if it poses any new questions.

If you find two notes spark a new idea when connected together, you can capture it in **an intermediary idea note**. This is a new insight that you have discovered and may not have been thought about by anyone else before.

This is where the true power of the Zettelkasten comes in. You can start to innovate and link to ideas that are not usually thought of together. Over time, your Zettelkasten will exhibit emergence, where new and original thinking emerges from the original notes.

# INTERMEDIARY IDEA NOTES

PERMANENT NOTE

## Effect of caffeine on sleep

Caffeine is a stimulant that can interfere with sleep by blocking adenosine receptors in the brain, which are responsible for promoting sleep. Even moderate caffeine intake, particularly in the afternoon or evening, can make it harder to fall asleep and reduce the quality of sleep.



AN INTERMEDIARY  
IDEA NOTE ADDING  
INSIGHT TO TWO  
DIFFERENT NOTES

## The potential effect of decaf coffee on sleep

If caffeine can impact the quality of sleep, what happens if a person drinks decaf coffee close to bed time as it contains a small amount of caffeine?

ALSO A PERMANENT  
NOTE

### See also:

1. [[Effect of caffeine on sleep](#)]
2. [[Caffeine content in decaf coffee](#)]

PERMANENT NOTE

## Caffeine content in decaf coffee

Contrary to its name, decaf coffee is not entirely caffeine-free. Decaffeinated coffee typically contains 2 to 5 milligrams of caffeine per 8-ounce cup, which is significantly less than regular coffee. The amount of caffeine in decaf coffee can vary depending on the brand, the type of coffee beans used, and the decaffeination process.

## Conversational links vs archivist links

As you make links within your notes, you will need to decide how you want your links to look. Do you want to create a section at the end of your notes and list all the links? Or do you want to create inline links within the body of text and have it flow more conversationally.

Links that exist within a sentence are considered conversational links. This is because you can say the sentence out loud as though you were speaking in a conversation and the link wouldn't affect what you say.

An archivist's link is where you consider your notes as archival entries where the notes have specific titles. They may be written as titles, like how you would list a collection of book titles—except that it's referring to the title of a note.

You may prefer to add a dedicated section to your notes to list these links. I like to add a See Also section where I enter a numbered list of note links.

### The Emotions of Failure

ARCHIVIST STYLE LINK REWRITTEN AS A CONVERSATIONAL LINK

A [\[\[Fixed Mindset|fixed mindset\]\]](#) person will feel the emotion of failure very deeply. That feeling can feel permanent and become a haunting trauma. Rather than try to repair their failures, they would try to repair their self-esteem to feel good. This can be by looking for other people who are worse off, assign blame or make excuses.

A fixed mindset person will still feel the failure and it can be a painful experience. However, they know that it doesn't define them, but it's a problem to be overcome.

A [\[\[Growth Mindset|growth mindset\]\]](#) person will feel failure by not trying. They will look back at something they wanted so badly, had the chance to achieve it and did nothing as the failure.

### See also

1. [\[\[Growth Mindset Attribute Towards Challenges\]\]](#)

ARCHIVIST STYLE LINK

This example uses both link types:

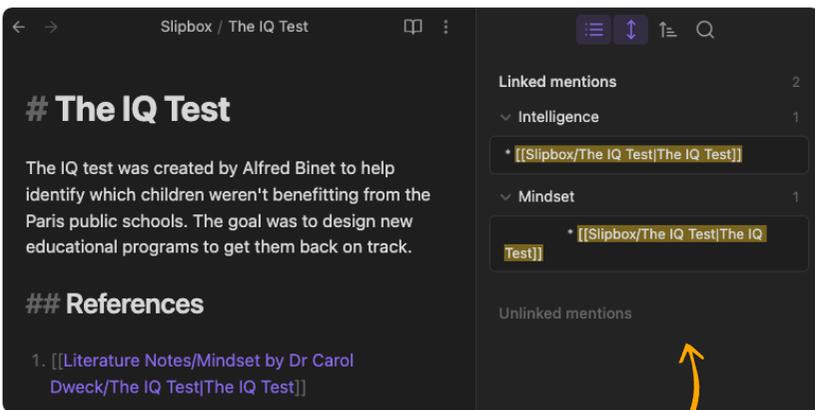
1. **Inline conversational links**—These are written as part of the sentence and have a label that is different to the note title. This allows you to read the contents and casually click the link for more context.
2. **See also archival links**—These are a collection of related permanent notes that might be a great place to explore after reviewing this note again in the future. They generally use the note title as their label.

## Bi-directional links

It's worth noting that while it is possible to create a link from one note to another, you could also add a reverse link back to the original note. So if Note A included a link to Note B, Note B could also include a link back to Note A.

You don't often need to do this because most software applications can show the backlinks. So in this case, if you're looking at Note B, the software can detect that Note A is linking to it. It can then show Note A in a list of backlinks.

The term bi-directional links simply means that you can see the links from your current note, and the links to your current note (backlinks) within the software application.



## The emergence of new ideas

One of the most powerful aspects of the Zettelkasten is that over time, the sum becomes greater than the parts. What this really means is that as you build your body of knowledge around certain topics, you'll start to spot patterns, insights and have curious questions. You'll add notes to encompass your thinking. You'll start to document insights that were not present in the original material you consume. New knowledge will start to emerge.

An example of this could be the patterns you spot around being successful. You start to create notes about people who ended up wealthy over the long term by avoiding short term monetary gain. Similarly, you create notes about people who stopped chasing fame as a measure of success, but focused on loving their craft and ultimately become more successful as a result.

As you create these notes, patterns emerge. It's like you're seeing the underlying rules of the universe. You notice this pattern time and time again. The pattern being that the things we're taught that are important are actually not what's important to succeed.

You can't get this out of your head. You now apply this pattern to new ideas—and they fit! You start to think about society, and that we focus on the wrong thing to achieve success. We focus on money, status and power. We focus on great grades. We focus on individual achievement by idolising the heroes. We focus on trying to make it rich quickly, or look healthy through diet and exercise. When all along, the universe tells us to slow down, enjoy the journey more than the outcome, and the outcome takes care of itself.

The above can be summarised by this quote:

*Success is not the key to happiness. Happiness is the key to success. If you love what you are doing, you will be successful.—  
Albert Schweitzer*

While a convoluted example, for sure. I hope that it highlights that patterns start to emerge in your Zettelkasten. Lean in. See where they take you. You might just discover something that has a huge impact.

## **Comparing to how our brain stores information**

The way we store information in our own brain is often thought of as a network of neurones. Information isn't just simply encoded in our memory, but is also associated with other memories. If you were to recall the company Apple, you would most likely associate that with the late CEO Steve Jobs, the current CEO Tim Cook, the iPhone, the App Store, the iPad and the MacBook.

Our brain forms connections between memories, and when we want to remember something, it can be helpful to associate those memories with other things. This technique greatly enhances our ability to recall the information later on. This memory-enhancing method is known as mnemonic devices.

One such example would be to remember someone's name. I have a much greater chance of remembering it if I can pair the memory with another association. If their name was James, I could refer to the book *James and Giant Peach*, and as such visualise a peach.

The Zettelkasten works similarly. Each idea is an atomic note stored in the system—like a single piece of information stored in your memory. Within other notes, you can link to this note to aid the recall later on. In a crude sense, to recall someone's name in a Zettelkasten system, you could look up "Peach" and see a link to "James and the Giant Peach" which in turn links to "James".

When storing your notes, it's beneficial to organise them in a way that aligns with your natural thought process. This approach allows for smoother navigation within your Zettelkasten system as it becomes more familiar and coherent. Instead of struggling to remember where you placed a particular note, simply consider where you would

naturally expect to find it. This intuitive method enhances the accessibility and sense-making of your notes.

This is why it can be hard to adopt someone else's Zettelkasten. How they organised it may be different to how you organise it. That said, it can be a good exercise to explore how other people think about the problem. It may interrupt any biases you gravitate toward. A change of perspective through someone else's eyes might be beneficial if you want to see things differently.

## Used as a tool to think

The Zettelkasten is a powerful tool that allows you to do your thinking. Only when you write your thoughts down do you really consider them in their entirety. You avoid your brain skipping details or jumping to conclusions. Instead of assuming that you understand correctly, put it to the test by writing down your thoughts.

The act of writing and storing your thoughts removes the burden of having to remember everything. It gives you the benefit of improving your understanding of the subject by helping you think it through clearly. You use your writing as a way to reason about the subject, compare it to other notes, and question and contradict your thinking. It allows you to perform true critical thinking.

Over time, your perspective and understanding will shift. By having your thoughts written down you will be able to observe this shift as you review older notes. You'll be able to audit what you've said and when you said it. You can see how your ideas evolve and consider what has caused the change. This is how you become a better thinker.

Thinking in isolation can only go so far. You need to share your ideas with others so they can challenge your understanding and help you consider what you have missed. You can't do this when it's only stored in your mind. Write it down and share it with others. Create an open feedback loop by allowing others to contribute. That's how you truly learn.

USED AS A TOOL TO PUBLISH

## Used as a tool to publish

Depending on your goals with your Zettelkasten, you may wish to create some work from it that you can publish. This can be anything from a doctoral paper, a blog post, YouTube video, educational course or even a published book.

Your Zettelkasten becomes the foundation from which you create your work. It removes the pain of trying to create where you have nothing to go on.

Your notes become the atomic blocks that you can use as the foundation for your work. They provide a content rich outline ready for you to provide the narrative.

## Top down publishing

One approach to creating publishable work is to first start with your idea. This is the thing you want to write about. Look within your Zettelkasten to see if you have any notes to support it. Often, you will find gaps meaning that you have some more research to do.

This is referred to as a top down method of publishing. You start at the desired output, then fill in the gaps in more detail as you go. I like to imagine this as someone laying down the train track while the train is approaching.

While this method can be useful, it does make it hard to get into the flow of publishing. You end up having to switch back to your research in order to find any missing information. You can refer to this as 'just-in-time' note-taking as you manufacture the notes only when they are needed in your publishable work. This is not fun when you have a strict deadline and are under pressure.

If you're just starting out with your Zettelkasten or entering a new subject area, you may find that you simply don't have enough notes to publish your work. But over time as you build up a wealth of knowledge in your slip box, you can switch to bottom up publishing.

# TOP DOWN PUBLISHING

## Growth Mindset Programme for Teams Introduction

In this programme we'll cover what a growth mindset is, the difference with a fixed mindset and how to foster a growth mindset culture within your teams.

This guide is aimed at leadership and line managers.

### The benefits of a growth mindset within a team

- What are the benefits of a growth mindset #todo
- How does it relate to being in a team #todo

### Comparison with the fixed mindset

- What are the attributes of a fixed mindset #todo
- How does it compare with a growth mindset #todo

## Management

### Traits of a growth mindset manager

- What is a growth mindset manager #todo

### Traits of a growth mindset employee

- Traits of a growth mindset employee #todo
- How it compares with a fixed mindset employee #todo

### Developing a growth mindset in your team

- What are the steps a manager should take to help an employee have a growth mindset #todo
- What about a team as a whole #todo

AN ARTICLE WRITTEN USING A TOP-DOWN APPROACH

START WITH THE HIGH LEVEL POINTS

OUTLINE WHAT YOU WANT TO ADD MORE DETAIL ABOUT

USE #TODO TO INDICATE WHAT RESEARCH TO CARRY OUT

## **Bottom up publishing**

Rather than pick an idea to write about, look at what you have already discovered in your Zettelkasten, and use that as a basis to create publishable work.

This means you will often have lots of ideas and insights in your slip box. You just need to surface them in a final publication.

This is a bottom up approach. Only when you have sufficient notes and ideas do you elevate them to be a publishable piece of work.

The magic here is that your publications become an organic product of your Zettelkasten. You may find that many insights could become publishable work at any moment in time. Like popcorn popping, all the kernels are heated simultaneously—just like you making notes on various topics. Only when they individually reach a certain temperature do they pop into popcorn—when you have enough insight to create a published piece of work.

## **The benefits of creating published work**

By publishing your work, you create a snapshot of your understanding at a given moment in time. You may have something valuable to share that can be of benefit to others. Publishing your work is a way to pay it forward and give that knowledge to someone else.

Publishing your work will invite others to comment on it, question it, or expand on it. This is how you learn. You get to receive valuable feedback that helps you see things from multiple perspectives.

Publishing your work helps you keep your thinking clear and concise, making it easier to evaluate and recall. The simpler you can explain something, the better you understand it.

# BOTTOM UP PUBLISHING

## Growth Mindset Programme for Teams Introduction

In this programme we'll cover what a growth mindset is, the difference with a fixed mindset and how to foster a growth mindset culture within your teams.

This guide is aimed at leadership and line managers.

AN ARTICLE  
WRITTEN USING  
A BOTTOM-UP  
APPROACH

## Growth Mindset

A growth mindset is the belief that abilities can be cultivated. You don't know how much you can change or how long it will take. It also doesn't mean that because change is possible that you should seek change.

START BY  
ASSEMBLING THE  
OUTLINE USING  
YOUR EXISTING  
PERMANENT NOTES  
AS BUILDING  
BLOCKS

## The benefits of a growth mindset within a team

Fostering a growth mindset within your organisation is key to having a highly supportive, innovate, self learning and creative team. Your employees will have greater trust and a sense of empowerment and ownership of the work they do, be fully committed and willing to go the extra mile.

FOCUS IS SPENT  
ON WRITING  
THE NARRATIVE  
INSTEAD OF  
DOING THE  
RESEARCH

## Growth Mindset Teams

Teams who benefit from a growth are:

- Highly supportive of each other
- Encourage experimentation and innovation
- Encourage self learning
- Have a sense of empowerment and ownership
- Are committed to go the extra mile

PERMANENT  
NOTES WILL BE  
REMOVED FROM  
YOUR PUBLISHED  
ARTICLE

## Zettelkasten quick summary

To summarise the main concepts of the Zettelkasten method:

1. There are 3 main note types: **Fleeting**, **Literature** and **Permanent**
2. **Literature and permanent notes** are to be **written atomically**, meaning you can understand them if you were to read any note on its own
3. Fleeting notes are **quick, temporary notes** to capture thoughts, ideas, book highlights, quotes, etc
4. **Literature notes** are a set of notes **in the context of a single source material**
5. **Permanent notes** are your set of notes **in the context of all the material** you have consumed.
6. **Zettelkasten** translates from German to **the slip box (or note box)** and is where you **store your permanent notes**
7. Notes can be **linked together to connect ideas**
8. **Maps of Content** allow you to **organise your notes** by topic, theme or even a question or project



**PART 3**  
**ZETTELKASTEN**  
**BY EXAMPLE**

## **Fleeting notes by example**

When reading a book, an article or watching a video, you will most likely want to take notes. This is your way to capture the most valuable information and ideas.

The goal is to take the source material and condense it into smaller notes that carry the key ideas. You'll later use these to create your literature notes where they're written in your own words and your own understanding. Your fleeting notes should capture just enough information to be able to do this.

When creating fleeting notes, I like to consider using any of the note-taking methods explored in Part 1 of this book. If you want to create Cornell notes, use the outline method, create a mind map, or simply annotate highlights—they are all valid ways to create your fleeting notes. If you're on the move, you might want to record voice memos using your smartphone or smartwatch.

You can of course create fleeting notes even when you don't have a book to read, or video to watch. One example of this is daily journaling, where you capture the top of mind ideas that you can explore further in your literature notes. This is great for ideating on a particular topic or organising your thoughts.

Here are some examples of how I like to create fleeting notes.

### **Fleeting notes from the Kindle app**

When I read books, I like to use the Kindle app. I will often use my iPhone or iPad as this is a great way to read and make notes when either out and about, or relaxing on the sofa in the evenings.

### How To Define Critical Thinking

When people use the term critical thinking, it can mean different things. However, certain elements are essential for a fuller understanding of the concept.

The Delphi Project provided one of the best-known definitions of the term:

"Purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as an explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based"<sup>7</sup>.

A good translation of this definition into layman's terms would be the ability to think about connected ideas thoroughly and independently, basing those ideas on factual evidence. It is the act of turning the full force of our reasoning towards resolving real-world problems.

How is this done? Critical thinkers gather and categorize evidence data relevant to their problem to gain relevant knowledge. As different elements of the problem and its potential solution are understood, critical thinkers connect an issue's disparate parts into one workable framework.

Once a critical thinker has analyzed the problem, dividing it into digestible definitions and categories, will then use this knowledge to solve the problem.<sup>8</sup>

They then make the connections necessary to understand and define the problem and all of its components.

Another approach to defining critical thinking is to look at what it isn't. The word critical can throw people off. This is not an approach designed to criticize things we don't like. You

44 mins left in book

5%

My method of capturing fleeting notes within a Kindle book is to use the highlight feature within the app. How do I know what to highlight? It usually comes down to something like the following:

- Does it help explain something that I need in order to teach it to someone else?
- Does it contain a definition, quote or fact that I may want to reference?
- Does it make a point that adds reasoning and arguments to support the core message?
- Does it make a point that disagrees with my understanding or belief?

- Does it spark an idea?
- Does it remind me of something else—maybe something unrelated—that I want to capture and explore later?
- Does it make me feel an emotion?

The truth be told, I just let my brain take an imaginative leap of how it comprehends the information. The more books you read, the easier this process becomes and the easier ideas connect together in your mind.

When speaking with people who are new to making notes from books or articles, they often find they highlight most of the source information or type up a near replica of the original material. This usually happens when the topic is new and novel. There's so much information and they feel that everything is important.

As time goes on and you read more and more about the same topic, you'll naturally start to filter out the fluff and spot the interesting nuggets of information. Everything won't seem so novel and only smaller parts of the text will be the most valuable information to capture.

So if you're experiencing this, do not worry. Just know that the more you read, the easier it gets and the more selective you will become when deciding what to capture in your fleeting notes. If you capture less, the workload to create your literature notes also gets lighter. So hang in there.

## **Adding my own thoughts to book highlights**

As I make highlights within the book, I will often annotate them with my own thoughts and ideas.

# ANNOTATING THOUGHTS IN THE KINDLE APP

BY USING THE MOBILE VERSION OF THE KINDLE APP, IT'S EASY TO HIGHLIGHT PASSAGES AND MAKE FLEETING NOTES TO CAPTURE YOUR THOUGHTS



## FLEETING NOTES BY EXAMPLE

When deciding what to annotate a highlight about, it will often come from the following:

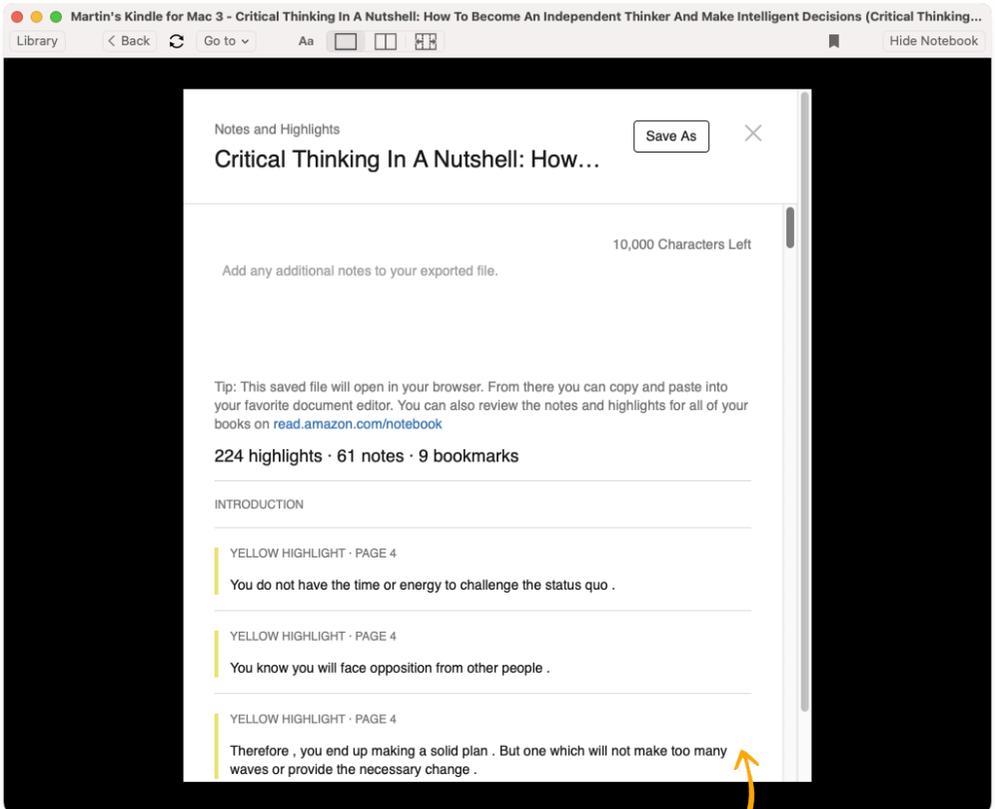
- **Can I explain what I've highlighted in my own words?**— This helps me confirm I'm understanding it correctly and makes it easier to create literature notes later as it's written in my own words and style.
- **What questions come to mind?**—While reading is usually a one way conversation from an author to a reader, by adding questions, I simulate being able to have a conversation back with the author. This helps me focus on what I want to get out of the book, making it easier to spot potential answers later on.
- **Does it give me an idea that connects it to something else?**—For example, it could be a eureka moment where I can finally see a pattern that's emerging.
- **Does it spark an idea for something novel and original?**— This is where I can let my mind think laterally and let the text be a catalyst for creative thought. These ideas may relate to the text, or may be completely unrelated.
- **Do I disagree with what was said?**—It's important to challenge the author as that's how I can truly think critically about the information they present.
- **Is it important?**—I may want to spend more time on it later, so I'll make a note to my future self to “pay attention” along with the reason why.

Reading a book is like having a conversation with the author. They have an idea they want to share and a story to package it in. My highlights and notes are how I engage in the conversation. The highlights are how I pay attention and the notes are my responses. I become an active reader rather than a passive reader. It helps me navigate my own thinking and enhance my understanding.

## FLEETING NOTES BY EXAMPLE

When I'm ready, I can export these to an HTML file using the Kindle app. This allows me to copy and paste it into my note-taking app for processing into literature notes.

There are third party applications like Readwise that can synchronise your notes to note-taking applications. The simple and free option is to export them from the Kindle app.



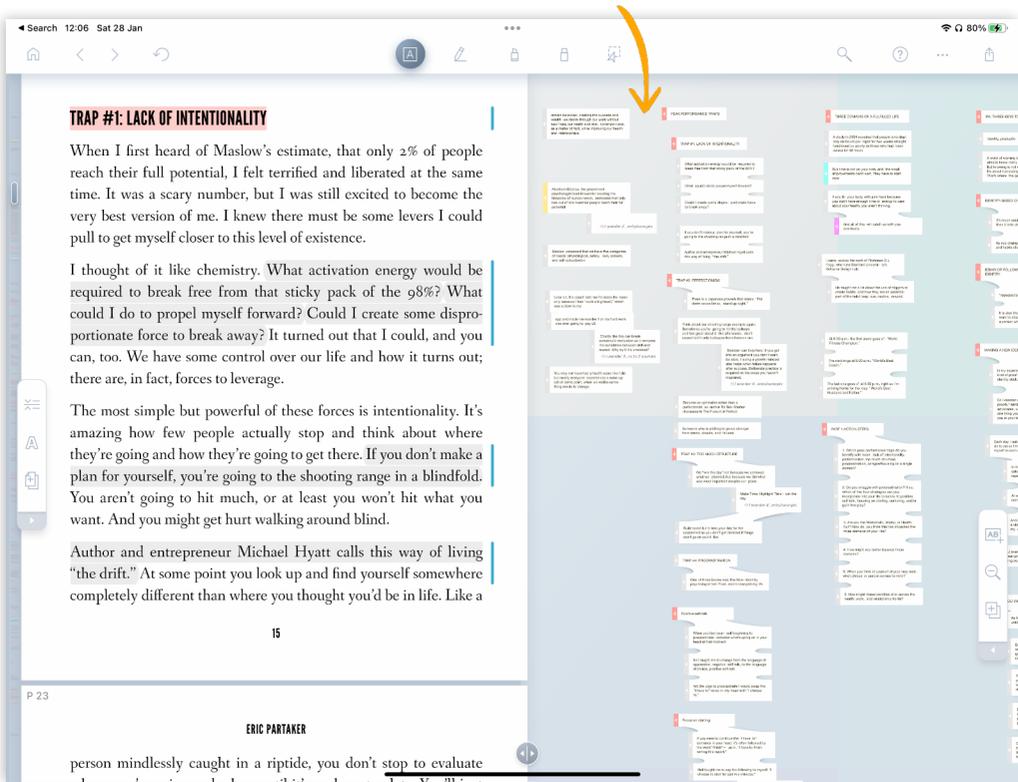
USE THE KINDLE DESKTOP APP TO EXPORT MY HIGHLIGHTS AND COMMENTS

## Fleeting notes from PDF documents

Sometimes you'll be reading books or documents which are in the PDF format. While you can send these to the Kindle app, there are other apps which are more suitable for this.

My personal favourite is LiquidText which I use on the iPad.

### DRAG HIGHLIGHTS ONTO A CANVAS USING LIQUIDTEXT



It provides a large canvas where I can highlight sections of the document and drag them onto the canvas. I can construct a slimline version of what's important from the document in a quick to navigate format.

You can also hand-write your own notes onto the canvas, but I find I generally don't like this as I prefer to type on a keyboard.

This method works great for PDF content where they don't format well for e-readers. You get to enjoy the beautiful presentation of the book without compromising your need to capture fleeting notes.

During this process I would mostly use it as a way to condense the important highlights from the book. I would then later expand on these within my literature notes.

The downside is that I'm not thinking in the same way as I would reading a kindle book. The ability to make quick fleeting questions is a little more cumbersome. I have to use the pen, or visually place what I want to say on the canvas. It adds just enough friction that I find I don't do it.

## **Fleeting notes from video courses**

Sometimes I'll be watching a video online or participating in a live webinar. Here I just need a place to type quickly and add screenshots. My goal is to capture the information that's relevant as quickly as possible. This is a great skill if you're watching a live presentation where you can't pause it to catch up.

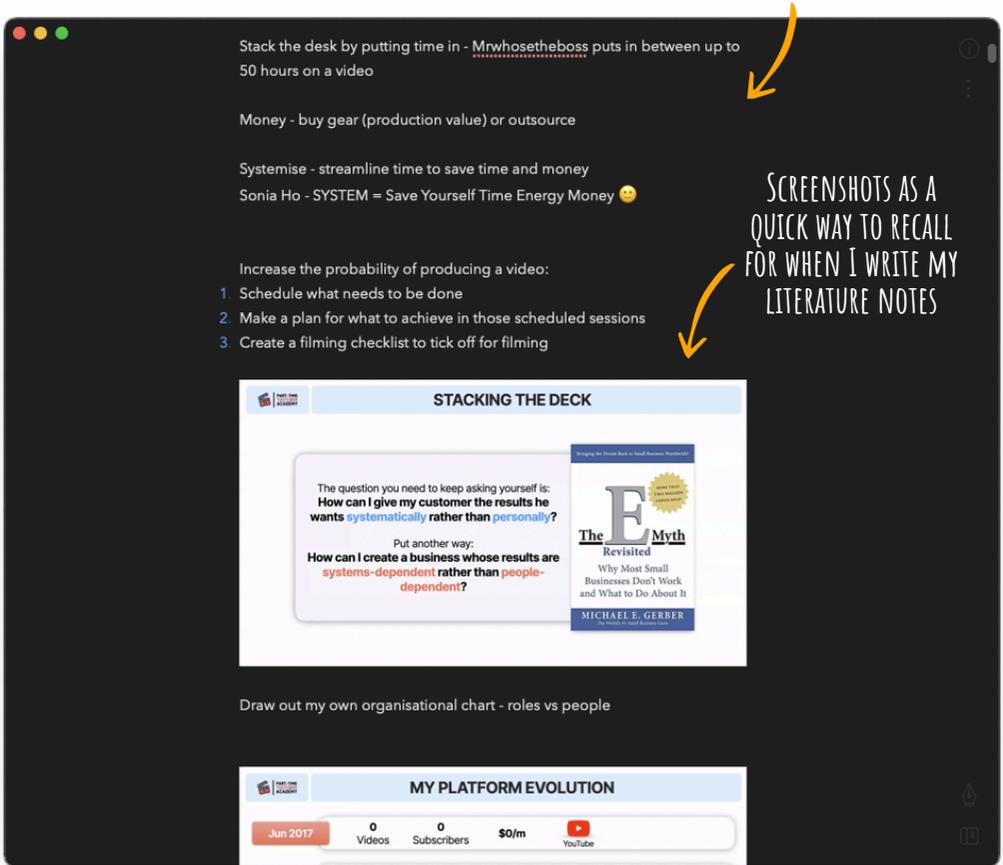
Here are a couple examples of how I have approached this.

### **Fleeting notes from the Part Time YouTuber Academy training**

I attended the Part Time YouTuber Academy by Ali Abdaal. The sessions were jam packed with information and I wanted to avoid having to go back through the recording a second time.

I used the Bear App on macOS to type quick notes for the key points and ideas. I would then quickly use the screenshot hotkey to capture the presentation slide and paste it in my fleeting note. The process is effortless.

CAPTURE RAW FLEETING NOTES USING THE BEAR APP ON MAC



SCREENSHOTS AS A QUICK WAY TO RECALL FOR WHEN I WRITE MY LITERATURE NOTES

This approach can generate quite a lot of notes. However, what I have achieved is transforming a linear training method spread over six weeks into a digestible document which I can create my literature notes from. It's complete with screenshots which help me recall the material easier.

Could I have simply read an e-book on the same topic and achieved the same result? I would say no in this case, as by participating in the

live lectures you get to immerse yourself in the topic and get live feedback from other participants.

The trick is to build the skill to participate and take notes at the same time. However, I appreciate that this is a skill that not everyone will possess. If you can't do both at the same time, then at least try to get the screenshots using the hotkey, and after the session, spend 20 minutes adding your fleeting thoughts while it's fresh in your mind.

You'll find that you won't be able to recall it as well if you leave time between attending the lecture and making your literature notes. I have often reviewed fleeting notes after a long period of time and realise they don't always make sense. Sometimes I can't easily recall why I made the note in the first place, or it feels out of context and refers to something missing.

### **Fleeting notes from the Impact Theory University Mindset course**

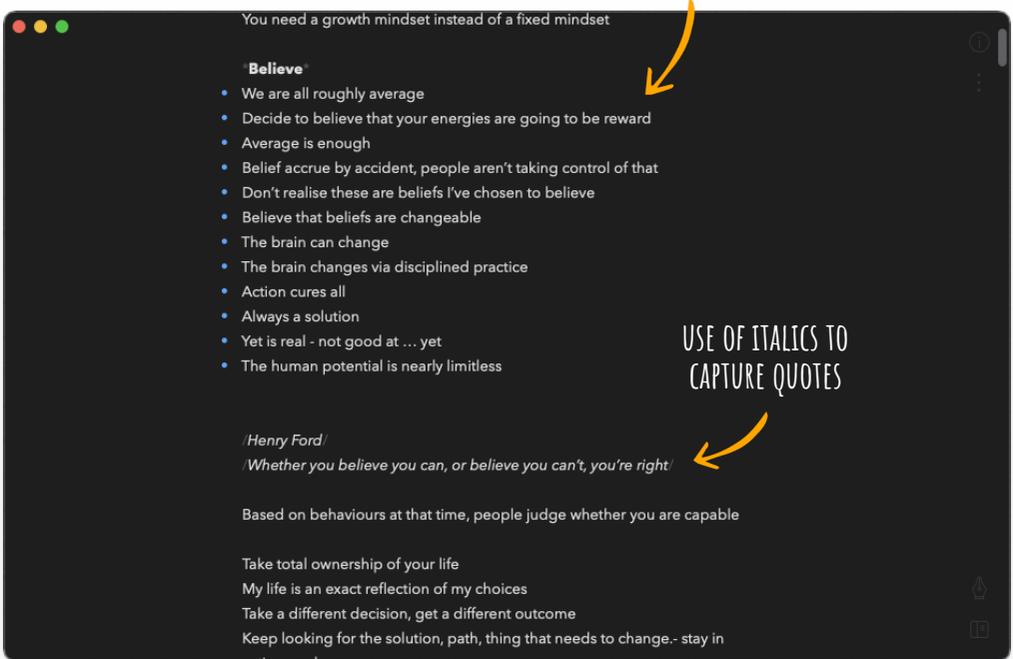
A number of years ago, I joined the Impact Theory University for their Mindset online course. This was densely packed with lots of ideas and information which I needed to capture.

In this case, there was little benefit in taking screenshots of the material, but instead I opted to make bullet point lists of the key ideas. As I was new to the topic, I found that I was capturing more information than if I were familiar with the topic.

I would find that I'm just typing out what the presenter was saying. There's nothing wrong with this. These are fleeting notes and I'm not claiming them as my own understanding. I will be transferring this understanding into my own atomic notes later when I create the literature notes.

Being a video course, it's easy to fall behind as the presenter talks faster than you can type. So I would often find that I would have to rewind it multiple times to capture what was said. Bear this in mind. A 30 minute video might take 60 minutes if you have to keep stopping and rewinding.

## BULLET POINT OUTLINE OF FLEETING NOTES USING THE BEAR APP ON MAC



The more you do this, the easier it gets. You start to become more picky about what you want to capture. If I'm new to the subject, it means I will end up capturing a lot. For a subject I'm familiar with, I'll capture a lot less as I'm scanning the material for only the gaps in my understanding.

## Fleeting notes from lectures and seminars

Another time you may find it useful to make fleeting notes is when attending lectures or conferences. Often, you won't see the source material in advance so you'll be experiencing it for the first time. This is where a tablet device with a keyboard or a laptop can be helpful—if you're a fast typer. Otherwise a notepad and pen can work just as well.

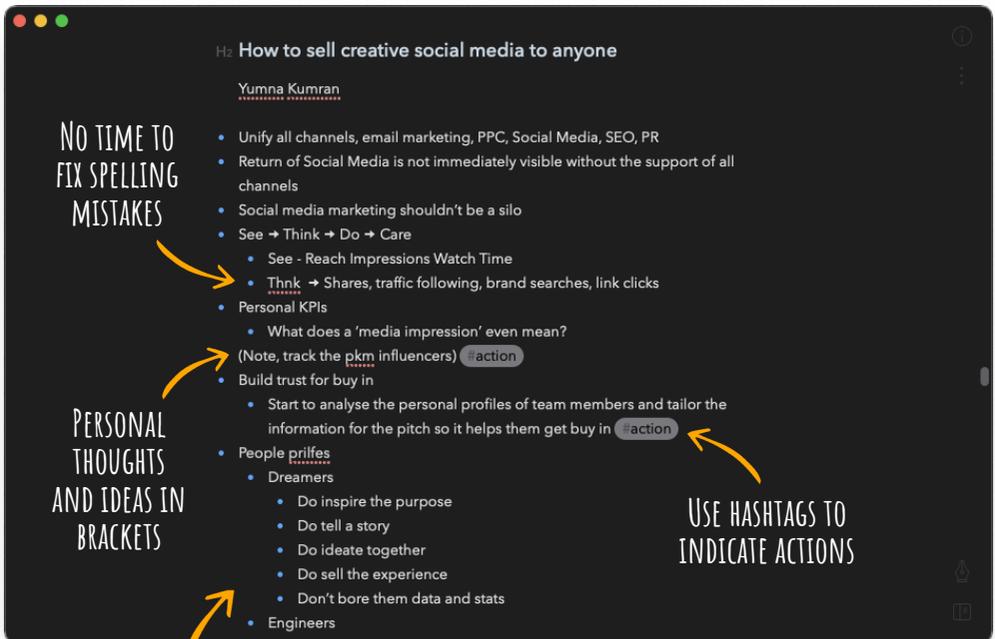
What I do is create an outline of the key ideas with the sub points.

My goal is to capture enough that I can filter it when creating my literature notes. There will often be too much information to capture, but you don't have time to filter it when watching the live presentation.

I like to think that it's good to capture one really good idea and let others slip, rather than try to capture everything but miss the key points.

I also ignore my spelling. That is a distraction when you can't stop the speaker from continuing on.

If something is really important, such as an action, idea or question, I will put a quick hashtag next to the line so I know to come back to it again later.



RAPIDLY CAPTURE THE KEY POINTS FROM A TALK IN A FLEETING NOTE

## **Fleeting notes from audiobooks**

Audiobooks are a key part to how I learn. However it is one of the most difficult to capture notes from as I'm often listening when walking or driving.

For this reason, I mainly use audiobooks for high-level conceptual thinking. These books are to help me expand my understanding and belief system. It's to help me open up my mind and explore ideas that I wouldn't have otherwise. From the years of listening to audiobooks, I find they are best used to gradually reprogram your mind. This has been invaluable to help me understand leadership, mindset, education, relationships, creativity, health and spirituality.

If the topic is something I care about and want to explore more deeply, I will get the kindle version as well to study. Usually these books are topics I want to pay forward by becoming a teacher through content creation.

With that said, sometimes there is something really profound in an audiobook that I just have to capture. Here I would open the Bear app on my phone (not while driving though) and capture the fleeting thought. This goes on my inbox of fleeting ideas to pick up again at a later time.

I have experimented with making notes while walking using the swipe typing on the iOS keyboard. It works, but takes a lot of concentration. Don't do it when crossing roads.

More recently, I have started to use the voice memo recording on the Apple Watch. This is fantastic as I can capture my ideas when on the move. The downside is that it's hard to reference the section of the audiobook that inspired the memo and you have to be comfortable saying your thoughts out loud. Part 4 explores this in more detail.

Another technique I sometimes use for audiobooks is to get the unabridged Kindle version of the book alongside the Audible audio version. The unabridged version means that it's the same text in the



audiobook and the ebook allowing the Kindle app to read along with the text.

The easiest solution by far is to see if the summary of the book is available and use that for my note-taking after listening to the audiobook. All this however is dependent on your budget and whether the books are available in the different formats.

## **Fleeting notes from an article**

While having various techniques to make fleeting notes is great, it doesn't really answer the following: what notes to make, how frequently, and how detailed. Two people reading the same text can interpret it in vastly different ways. One may make highly detailed notes and the other, sparse.

There is no right or wrong answer to how you make notes. Like making only a few notes? Go for it. Like writing lots of notes? Go for it. What is important is that it aids your understanding of the material and allows you to gain your own independent thinking. If your chosen

## FLEETING NOTES BY EXAMPLE

method takes too long and you never have the time to do it, then maybe you should adjust to an easier method and focus on the broader concepts rather than the details.

If you are at the point where you just don't know the best way to make notes, I'll illustrate my method using an article from my blog. I've used my blog to illustrate to avoid any copyright concerns.

Text in **light orange** are the highlighted passages from the article.

Text in **blue** are thoughts or annotations I have related to the highlight and are not in the original article.

Article link:

<https://meda.io/why-do-i-get-motivated-but-never-do-anything/>

## Why do I get motivated, but never do anything?

As I further explore the traits and habits that successful and happy people have, I have observed that it is not uncommon for individuals to **get motivated by a new goal, but then take no steps to do it** **[Highlight: This emphasises the problem that people don't take action]**. Reflecting on my own experience and of those who I encounter, it is a perplexing and saddening affair to watch one's dreams dissipate into nothingness.

What is it that is preventing us from working hard, developing our craft and gaining mastery of our skill? What is it that throws us off track to the point where we give up and move onto something else?

Is it just bad habits? Is it laziness? Did we really want it at all, or was it all just a wish without any real commitment? **Are we just being hard on ourselves** **[Comment: Is this true, are we being hard on ourselves, and if so, what does that look like?]** or do we just **lack the confidence to accept the failures** **[Comment: Being able**

to accept and confront our failures without affecting our confidence or self esteem is a critical trait to having the courage to take action] and overcome them triumphantly?

As I seek to answer this, I uncover a phenomenon called motioning, or to be in motion rather than in action [Highlight: Key theme mentioned here].

Imagine you want to become a better writer. You read a few articles about writing techniques, then you find an online training course on the subject. This feels great as you're gaining a new perspective and knowledge on the subject which you previously did not have. Your motivation peaks and you get excited so you turn to social media to announce your new found passion and goal – to write a book [Highlight: Emphasising this as it's a way to visualise the traits someone has when they exhibit motioning]. You may even plan out a few chapters and a catchy title. You then retire for the night and feel pumped and positive. Tomorrow will be the start of your new found path.

Morning arrives and as you wake, you slip right into your previous routine [Comment: This happens all too often. We have the ambition to make a change, but we fail to set a new habit or routine to make the change happen. How can we focus on new habits when we have motivation?]. The groggy memory of the excitement last night starts to fade. You still feel positive, but real life is calling you back to the fray. The day is tiring, and your new learning and book become passive thoughts when you have a spare moment.

The days pass, then weeks. You feel a sense of guilt [Highlight: This is capturing the emotions that signal motioning] that you haven't acted on the thing you announced very proudly on social media. You regard those articles on writing as critical assets, the doorway that lights the path to your new future life once again. You're scared to close those precious few browser tabs that keep your dream alive. You eventually close them and they are lost forever, along with your dream of being a writer.

As dramatic as this scenario may be, we all face this type of challenge. We have a spark of motivation which is crucial to finding a new path, but **we often act hastily** **[Highlight: This adds context to what actions lead to failure]**. **We are ill equipped to turn motivation into a habit** **[Comment: This is introducing that habits play a role in relation to motivation]** – a habit that will carry us to achieving our goal. **This is motioning – all intent and no action** **[Highlight: A catchy summary of motioning]**.

The worst part is that **our brain is not well equipped to tell the difference between actually achieving, or the mere intent to achieve, our goal.** **[Comment: Where did this statement originate from, what science backs it up?]** **The sheer fact that we broadcast our intention, collect articles and make a plan is enough for our brain to feel good, so we stop taking action** **[Comment: Can I spot this trait in my own experience?]**. We were in motion, but yielded no action – and our brain tricked us.

The good news however is that this is completely normal behaviour. We are often blind to its presence, but once we recognise it, we can do something about it. So let's explore how we can avoid the act of motioning, and start doing.

**Avoid extrinsic rewards** **[Highlight: Key solution point]**

We want to avoid putting our rewards on some external validation to measure its value. So **don't look to external validation for your goals or actions** **[Highlight: Solution point]**. This means to **stop announcing to the world** **[Highlight: Solution point]** what you're going to do, and just do it instead. There are no amount of likes, replies and retweets that will move you forward in your goal. Those are just **vanity metrics** **[Comment: Explore vanity metrics in more detail]** that keep you distracted, but when it's all said and done, hold very little value. **Get no engagement and you feel deflated. Get too much engagement and you feel overwhelmed that you've taken on more than you can chew.** **[Comment: Interesting balance between too little and too much]**

The real benefits come from **intrinsic rewards** **[Highlight: Key point]**. **Focus more on the mastery of your craft** **[Highlight: Solution point]**. If you want to write, focus on the skill of communicating efficiently and elegantly. Only compare yourself to your previous self and never to anyone else.

### **Schedule your actions** **[Highlight: Key solution point]**

It is one thing to create a plan of what to do, but **it is more useful creating a plan of when to do it** **[Comment: Not to do lists, but do lists with a specific date]**. We often abandon goals under the excuse of not having enough time. But yet while we are all given the same 24 hours a day, why is it that some achieve more than others? It's not that we don't have enough time, it's that **we never allocated our time to actions we need to take** **[Comment: We just never made it a priority and never scheduled it in. This might be the root ah-ha point of the article]**.

Simply scheduling time doesn't mean we'll do it. **Be realistic and start with just 5 minutes of time scheduled** **[Comment: What does this really mean? Is it that we should commit to just 5 minutes of action?]**. A schedule creates a routine, and a routine is formed from habits **[Highlight: Key solution point]**. **Get into the habit of just turning up** **[Highlight: Key solution point]**.

### **Build on incremental habits**

**We must start small** **[Highlight: Solution point]**, and I mean very – almost boringly small. For example, start with writing for 5 minutes per day, every day. Something that we can **still do when the motivation fades and the willpower is gone** **[Comment: What's the relationship between motivation and willpower?]**. Writing for 5 minutes will not impact anything in our lives. We can take a special intrinsic satisfaction in doing it consistently and must protect the activity like we need to protect our ability to breathe.

Only when we are comfortable to trust that we can turn up every single day for 5 minutes, then we can start to expand on your actions. **Get into the flow of doing the actions that will achieve our**

goal so that it's frictionless to turn those 5 minutes into 10, 20 and even 60 minutes at a time **[Comment: Only after building the habit should we increase the difficulty]**. We will benefit from the compound effect of all these small habits.

### **Remove friction [Highlight: Key solution point]**

Our physical environment can be a significant hindrance to achieve a state of flow **[Highlight: Key benefit]**. Imagine that during the course of a day we have a set of willpower coins. The moment something interrupts your flow — an untidy desk, a friend who dumped their daily crap on you, an unexpected telesales phone call or no milk in the fridge — we spend a willpower coin **[Comment: Key concept of having willpower coins that we spend]**. By the end of the day, we will have used most, if not all of our coins.

We must avoid spending our willpower coins by optimising our physical, social and spiritual environment **[Highlight: Key solution point]**. Clear our space, plan our meals, turn off our phones, be mindful to avoid negative conversations and meditate to clear our mind of daily stresses. With practice, we'll be able to enter a state of flow when we carry out the actions for your goals.

### **Be committed [Highlight: Key solution point] — deeply committed**

We often have an image of ourselves that we wish we were. We may wish we could play the guitar, look athletic or write a book. The list is almost endless and with a spark of motivation we may set our sights on these goals. The truth however is a little more harsh than we'd like to admit. More often than not, we don't really want these things. We are interested in them, but we're not committed. **[Comment: How do we know if we really want it or just like the idea of it?]**

This means we won't give up our daily comforts and introduce new stresses and pains to get it **[Comment: "The draw of familiarity is greater than the pull of change"]**. We don't obsess

and strive to push for every waking moment to seek it. We simply just weren't that interested.

In order to succeed we need to pick our primary calling of **what we are prepared to sacrifice our comforts for** **[Comment: Are we over optimistic that it won't take sacrifice? Are we scared to sacrifice, maybe because it lets someone else down? Do we downplay the need to do it?]**. Everything else is secondary and we should avoid spending energy on these and focus on our one true goal.

Sometimes we may not know what that true goal is. That's actually okay. **Using incremental habits** **[Comment: We don't always know what we want, but we can focus on gaining skills and let the passion find us later]** to keep turning up and develop our mastery, we can turn one of our interests into something we are committed to. Experts often only become masters in their craft after years of turning up and doing the work, and not because they were passionate about it.

Once we find our true goal, we must remove the noise that is distracting us. **We need to be okay with letting go** **[Comment: This is a subtle point. What does it actually mean to 'let go' and is this a hard thing to do in reality?]** so that we can focus our energy on the actions that will help us succeed.

Motioning if left unchecked means we continue a **cycle of being dreamers who are perpetually waiting for something external to make our dream happen** **[Comment: We might be observing this in others. Do I do this?]**. By observing this we can recognise it and mitigate the negative effects. We can focus on small habits that allow us to develop grit so we stick through it when motivation and willpower are at an all time low. We can turn our attention inwards and value the mastery of our craft rather than the validation from others. We can be comfortable with letting go of the things that are noise, be patient – and create a habit of doing.

Depending on how you want to capture your fleeting notes, the results may be a condensed version that looks like the following:

## **Motioning**

- Motioning is to be in motion but not taking action
- Triggers:
  - Motivation and excitement peaks
  - Announcing publicly for the likes—extrinsic reward
    - More research on this needed
  - No habits set, you just do our old routine and take no action
  - We act too quickly without thinking it through
  - Didn't make a plan to turn it into a habit
- Consequences:
  - We don't take action
  - Our brain got the dopamine hit by announcing it publicly
    - Vanity metrics if done on social media
    - Negative emotion if we didn't get the likes
    - Negative emotion if we got overwhelmed that we can't deliver
  - We start to feel guilty
    - How do we feel about this? Do we berate ourselves? Does it affect our self esteem?
  - Dreamers just waiting for something to happen
    - Should be making it happen ourselves
    - Do I do this?
    - Do people I know do this?
- Solutions:
  - Intrinsic rewards
    - Reward the craft not the goal
  - Schedule your actions
    - Do list instead of todo list
  - Incremental habits
    - Start extremely small
    - Helps overcome when motivation and willpower fade
    - Grow your actions only when you establish the habits
    - Don't bite off more than you can chew

- Remove friction
  - Don't spend willpower coins on avoidable things
  - Optimise physical, social and spiritual environment
  - Get into flow
- Be committed
  - Interested vs committed
  - How do we know if we really want it or just like the idea of it?
    - We don't always know what we want
    - Sometimes passion follows skill
  - What daily comforts will we give up?
  - What pain will we be willing to accept?
  - "The draw of familiarity is greater than the pull of change"
  - Be okay with letting go
    - Let go of what exactly?
    - Is it hard, why is it hard?

This is just one example of what condensed fleeting notes might look like. Everyone will approach this differently. These notes are now ready to be converted into literature notes.

You'll notice that there are some open questions in my fleeting notes. These are prompts to allow me to explore the possible answers. This is my way of having a conversation between the author and myself. Sometimes great insight can come from deliberately asking questions that challenge the idea, or even challenge myself. We can use it as a prompt that allows us to step back from focusing too narrowly and think laterally about the topic.

These questions also become a set of open enquiries that we can relate any further research to. We're now scanning for the answers.

## Literature notes by example

With my fleeting notes at the ready, it's now time to write the atomic literature notes. The goal is to write as simply as possible.

### Motioning

Motioning is where we feel progress towards a goal but take no action.

#### See Also:

1. [\[\[Motioning triggered by our brain\]\]](#)

### Motioning triggered by our brain

This can be triggered by our brain receiving a dopamine hit from us performing the intent of carrying out a desired action, but without actually acting on it.

For example, sharing our intent on social media and garnering likes can be enough to feel good about it, giving our brain a signal that we have accomplished something, when in fact, we haven't. This can reduce the desire to carry out any further actions.

### Failure to acknowledge motioning

We may fail to admit that we are in a state of motioning because it may trigger a sense of guilt or embarrassment. Our social credibility is on the line if we have shared publicly what we will be achieving.

One trait that may follow to avoid embarrassment is to find a new project to announce that sounds like you're marking further progress, but you're masking the previous failures.

## Vanity metrics

We may often seek vanity metrics, such as likes on social media. These give us a sense of progress and success, especially when in relation to a project we are talking about. The downside is that the metrics have no bearing on our ability to deliver the project.

If we receive little engagement, then our self esteem is negatively impacted because it comes across as a failure or unworthy project. If we receive a lot of support from others, then it can become overwhelming and a sense of imposter syndrome can creep in.

## How to avoid motioning

To avoid motioning you want to avoid **[[Vanity metrics]]** so that **[[Motioning triggered by our brain]]** doesn't happen.

Create a plan of the actions needed to act on the goal. These can include:

1. **[[Incremental habits]]**
2. **[[Do dates instead of due dates]]**
3. **[[Remove friction]]**
4. **[[Be committed]]**

## Incremental habits

These are small habits that can be started that gradually increase in intensity. The goal is to build the habit of doing the task initially, not that the task is done well. Only once the habit to perform the task is established, can the intensity of the task be increased.

Without habits you will default into your old routine as this is the path of least resistance.

“The draw of familiarity is greater than the pull of change”

## Motivation vs willpower

Motivation happens when you act on a task when you are in the mood. This may happen at the start of an exciting project.

Willpower is what will get you to act on the task when you are not in the mood.

The problem with both is that if you lack both motivation and willpower, there is little chance that you will act on the task.

To overcome this, build **[[Incremental habits]]** to reduce the effort required to perform the task.

## Do dates instead of due dates

When creating a task list, instead of allocating when the item is due, put the date that you will work on the item. This means everything can be scheduled and isn't left to chance of being completed in time.

## Remove friction

In order to help get into the flow of a task, you want to remove as much friction as possible that can slow you down.

This can include ensuring that your workspace is kept clean and tidy. Avoid things that can cause interrupts, such as notifications on your smartphone. Be mindful of the people who influence your mood, particularly if they tend to give you their problems.

## Be committed

Often we make goals on projects that interest us. But when it comes down to it, we aren't prepared to make any sacrifices that would enable us to commit to the project.

We fail to question what comforts we currently have that we would be prepared to give up.

Similarly, we often fail to ask what pain we're prepared to introduce in order to truly achieve the goal.

If we are unable to find items that we are not committed to, then we need to look at what skills we wish to develop instead.

## Skills vs Passion

When you have passion for something, it's easy to make sacrifices in order to follow that passion.

However, if you don't have passion for a goal, it can be hard to commit to it. If you don't know what you're passionate about, then focus on the skills to gain which can be utilised in many ways. This could be video production, writing, etc.

Only after mastering some skills in this area will you start to identify what parts you are passionate about.

### See also:

1. [\[\[Be committed\]\]](#)

You'll observe that I have used some internal links between the notes. This is useful to group the ideas together so they are easy to discover and explore when reviewing the notes.

What can be useful is to add a references section to the bottom of each note and link it to the original fleeting note—or even part of the fleeting note if your software allows. Should you need to trace back to where your ideas originated from, you can do so. This is particularly useful if you're performing academic research and want to keep an audit trail of all your citations.

You'll notice that in this example I don't reference anything outside of the article, such as other articles. This is so I can focus on what the article has to say and make sure I really understand it without clouding my judgement based on other things I have read.

Now, of course, if this sparks an idea and you want to consider other notes or references in your literature notes, you can do so. These should really be placeholders for when you come to write your permanent notes and carry out your deep thinking.

I like to think of fleeting notes as a way to capture, literature notes as a way to understand, and permanent notes as a way to think deeply.

## **Permanent notes by example**

The goal of creating your permanent notes is to take your understanding from your literature notes and consider it holistically across your entire slip box.

For this example, we're going to use the book *Atomic Habits* by James Clear. To help set the scene, we'll base this on a set of literature notes from the book using the techniques described previously. Within the slip box, there are permanent notes that already exist, and were populated from the book *Mindset* by Carol Dweck.

Our objective is as follows:

1. Consider each literature note from the *Atomic Habits* book and make sure you understand them.
2. Consider where they sit within the collection of permanent notes.
  - a. Are there any existing notes that talk about the same thing?
  - b. Are there any existing notes that are useful to link to as their concepts are related?
  - c. Do you have any original ideas as you go through the process of converting them?
  - d. What Maps of Content would the new permanent notes best fit within.
3. Create a new permanent note or update an existing one. Either populate it with the contents of the literature note (I literally mean to copy and paste), or rewrite it as you want to express it differently.
4. Add a reference back to the literature note so that you can have an audit trail back to the original material.
5. Mark the literature note as processed.

Before starting, I orient myself with what permanent notes there are already within the sip box. This helps me get a feel for the best place to start.

In this example, the book *Mindset* has already been processed into permanent notes. It is organised with a main index note for the root topic 'Mindset'.

# ATOMIC HABITS LITERATURE NOTES

A MAP OF CONTENT FOR  
ALL MY LITERATURE  
NOTES FROM THE BOOK  
ATOMIC HABITS



THIS MOC IS ALSO  
STORED WITH MY  
LITERATURE NOTES



## Atomic Habits Index Note

### Detail

- [\[\[Habits\]\]](#)
- [\[\[The 4 stages of improvement\]\]](#)

### Type of habits

- [\[\[Goal-Driven Habits\]\]](#)
- [\[\[System-Driven Habits\]\]](#)
- [\[\[Identify-Driven Habits\]\]](#)

### Benefits

- [\[\[Compounding Habits\]\]](#)

### Problems

- [\[\[Arrival Fallacy\]\]](#)

### Resolution

- [\[\[Why habits are hard to stick to\]\]](#)

### How to

- [\[\[How to improve\]\]](#)
- [\[\[How to change your life\]\]](#)

## Habits

Half of what you do exists because you do it from habit.

We don't truly understand where we get our habits from. A lot of our habits happen subconsciously meaning that we don't know that we are good or bad at doing.

### The three types of habits

1. [\[\[Goal-Driven Habits\]\]](#)
2. [\[\[System-Driven Habits\]\]](#)
3. [\[\[Identity-Driven Habits\]\]](#)

### See also

1. [\[\[The 4 stages of improvement\]\]](#)

### References

1. [\[\[Fleeting](#)

EACH LITERATURE NOTE CAN REFERENCE OTHER RELATED LITERATURE NOTES FROM THE BOOK



## Goal-Driven Habits

When changing habits it can help to have it in the context of a goal. However, rather than trying to just achieve a goal, look at the habit that you need to change to make that goal achievable.

For example, if the goal is to write a book, the habit is to write for 1 hour every evening.

### The problems with this

They don't create long term change once the goal has been completed. For example, you stop studying once your exams are over. See [\[\[Arrival Fallacy\]\]](#).

### See also

1. [\[\[System-Driven Habits\]\]](#)
2. [\[\[Identity-Driven Habits\]\]](#)

### References

1. [\[\[Fleeting Notes/Atomic Habits#^55df3a\]\]](#)

A REFERENCE BACK TO THE FLEETING NOTE HELPS MAINTAIN A TRAIL BACK TO THE SOURCE MATERIAL



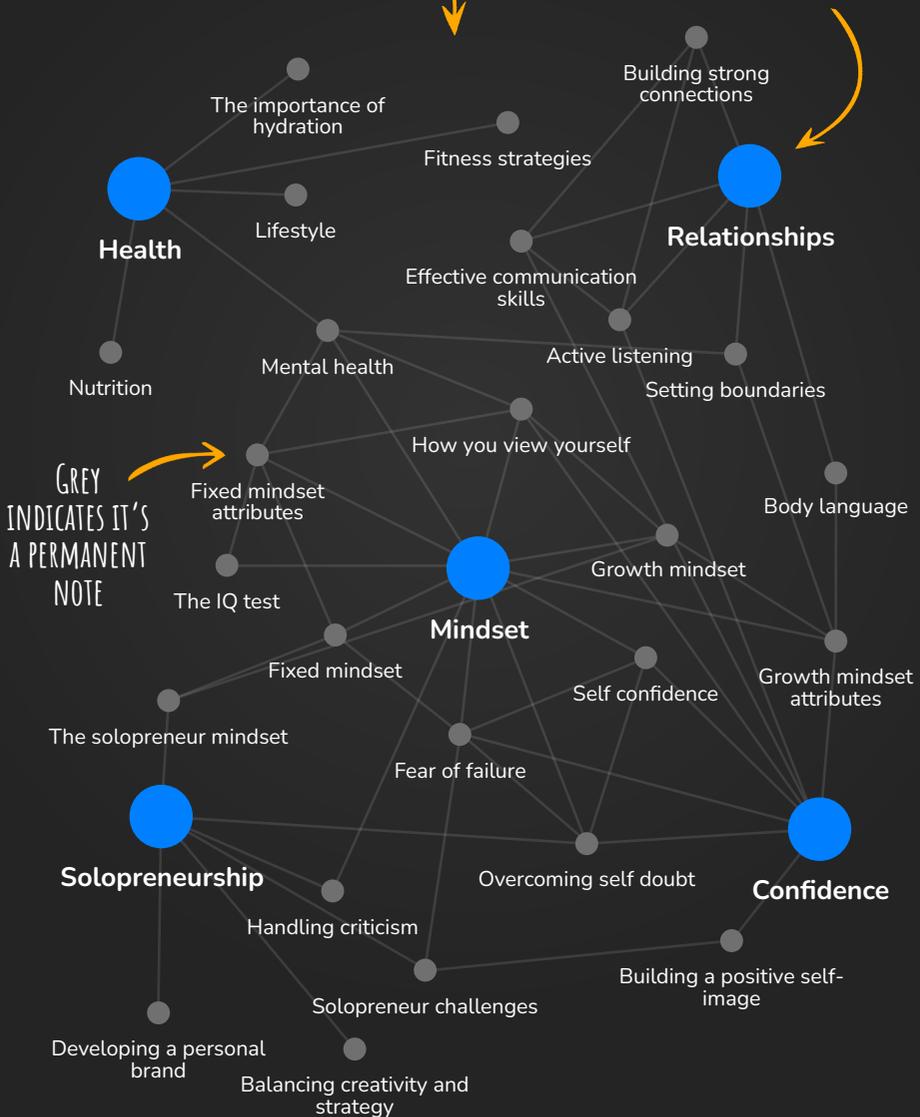
ANCHOR TO A SPECIFIC LINE WITHIN THE OBSIDIAN APP



# EXISTING SLIP BOX NOTES

GRAPH VIEW OF THE ENTIRE SLIP BOX CONTAINING PERMANENT NOTES

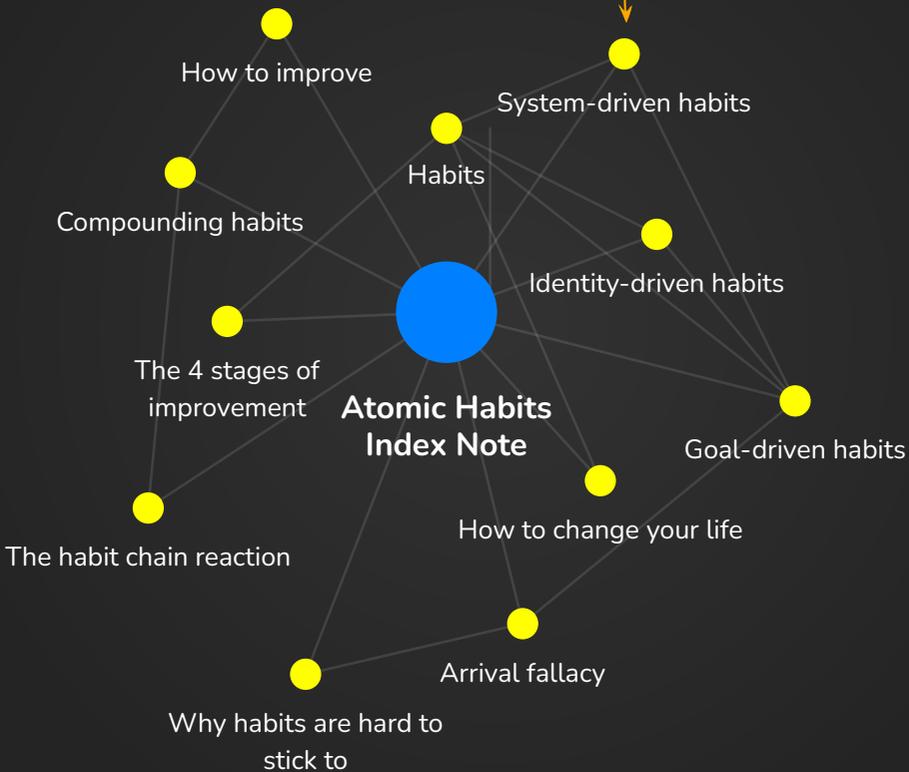
BLUE INDICATES IT'S A MAP OF CONTENT SHOWING THE HIGH LEVEL ENTRY POINTS TO EACH TOPIC



# ADDING LITERATURE NOTES TO THE SLIP BOX

A GRAPH VIEW OF THE LITERATURE NOTES FROM THE BOOK ATOMIC HABITS

YELLOW INDICATES IT'S A LITERATURE NOTE

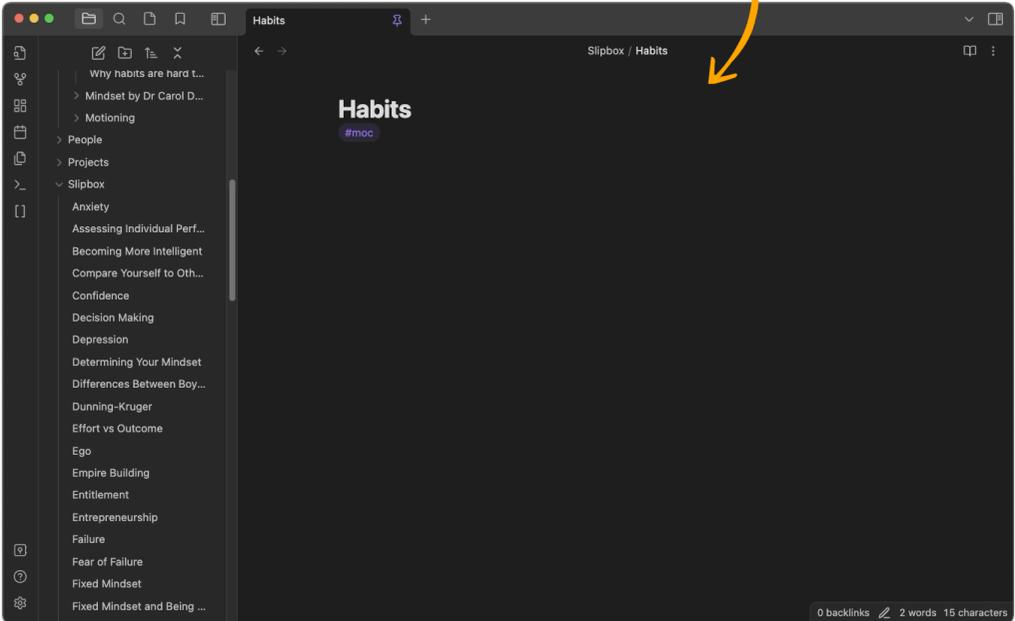


THE GOAL IS TO TAKE EACH LITERATURE NOTE AND IDENTIFY THE BEST WAY TO ADD IT TO THE SLIP BOX FULL OF PERMANENT NOTES

## PERMANENT NOTES BY EXAMPLE

To kick things off, I aim to create the top level Map of Content around ‘Habits’ within my slip box. I don’t already have this, so it’s a good opportunity to create it.

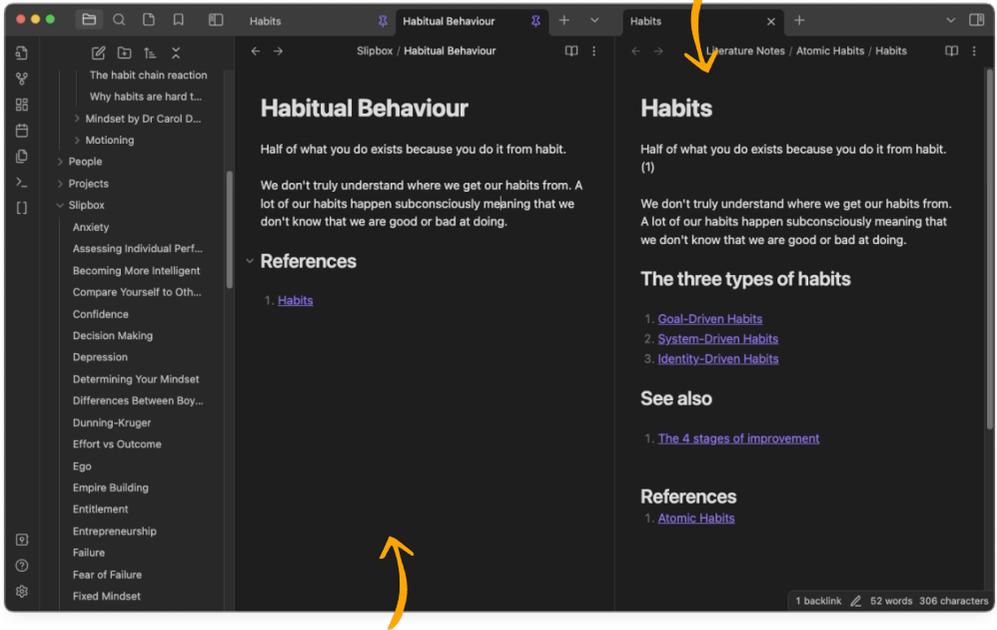
### NEW MAP OF CONTENT IN MY SLIP BOX



This will become my outline of how to think about the new Atomic Habits notes as I process them.

As I go through each note, I like to mark them as ‘processed’. One technique is to create a sub-folder called ‘processed’ within my literature notes. Another option would be to use a hashtag to track whether it is #status/pending or #status/done.

Using my software of choice, I pin the literature note to the right hand side, then start to populate a permanent note on the left hand side.



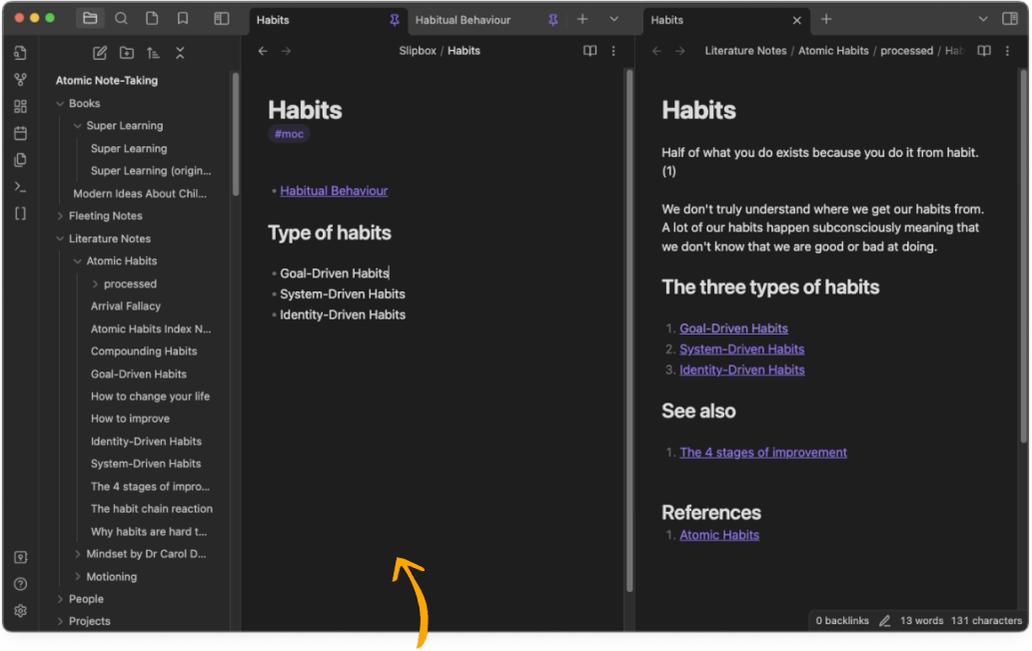
## CREATE OR UPDATE MY PERMANENT NOTE

I copy the content from the literature note to the permanent note and make the following change:

1. My **'Habits'** literature note is too generic when considering my whole slip box, so I named this **'Habitual Behaviour'** to make it more contextually relevant.
2. I mostly kept the text the same as this is a brand new note and I was happy with my original text. If I were to update an existing note, I would look for the best way to modify the content so that my previous and new understanding still makes sense.
3. I have decided that the section **"The three types of habits"** isn't particularly adding value, so I omitted it.
4. I added a reference to the bottom of the note that links to the literature note. This completes my chain of references back to the source material.

## PERMANENT NOTES BY EXAMPLE

Now that I have added my first permanent note, I enter it into the **‘Habits’** Map of Content.



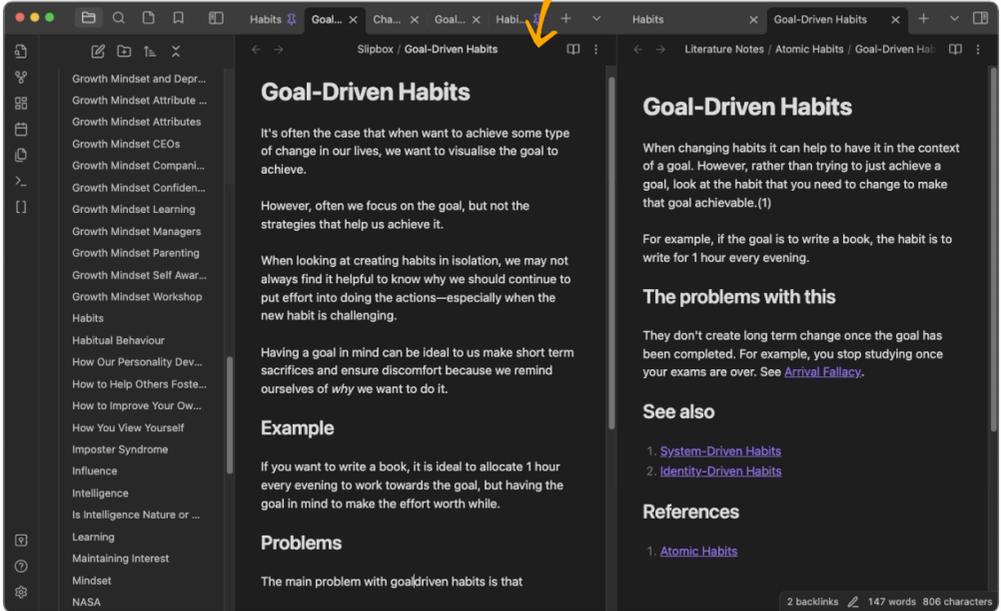
ADD THE PERMANENT NOTE TO MY MAP OF CONTENT

## Organising my thinking using a Map of Content

I like to use a Map of Content to organise the structure of the notes I'm adding. In the original literature note, I had the three types of habits listed. I felt that it would be better to move them to the Map of Content. Since I haven't processed those notes yet, I've added them as a placeholder bullet point list.

## Rewriting for a better understanding

When I process the literature called **‘Goal-Driven Habits’**, I decide that it's better to explain it more clearly when creating the permanent note version.



To achieve this I rewrite the scenario where a goal-driven habit is relevant, then expand with an example to help illustrate the point. Finally I conclude with the problems that can arise with a goal-driven habit, which links to a permanent note about the Arrival Fallacy.

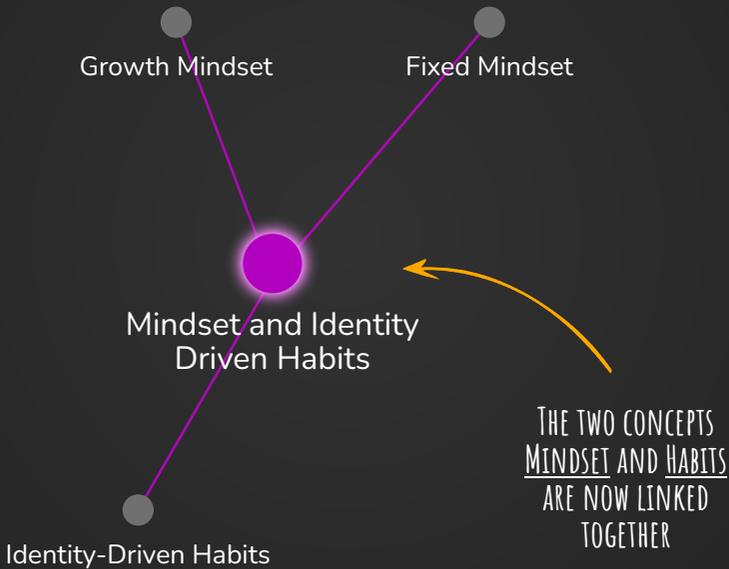
## Adding intermediary idea notes

As you process your literature notes into permanent notes, ask questions and consider how the ideas conveyed in the note relate to other concepts you have previously learned about.

This happened to me when considering Identity-Driven habits—where you develop your habits based on an identity that aligns with your goal. For example, if you want to lose weight by running, think of yourself as a runner, rather than just someone who runs.

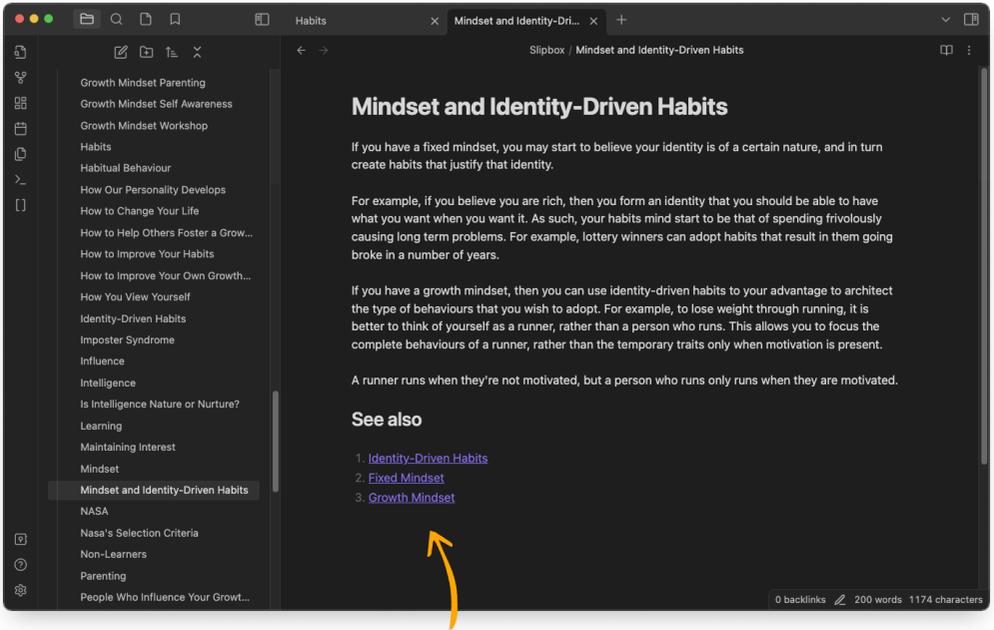
Since I had previously studied the Growth Mindset and how those with a Fixed Mindset tend to believe who they are is unchangeable, I wanted to explore how someone with a fixed mindset would respond to identity-based habits.

# AN INTERMEDIARY IDEA NOTE



This now gives me the opportunity to think more deeply about the relationship between these two concepts. I start to test out my thinking, such as what habits you have and identity you adopt if you come into money (such as winning the lottery). Does someone with a fixed mindset assume that because they have money, they are entitled to spend frivolously. Does someone with a fixed mindset have an identity not based in objective truth?

I'm asking whether identity-based habits are good or bad depending on whether you have a fixed or growth mindset.



RELATED CONCEPTS ARE LINKED IN THE SEE ALSO SECTION

To connect this intermediary note to the Fixed Mindset, Growth Mindset, and Identity-Driven Habits, I added a **See also** section and put the links there. This now completes the relationships where this intermediary note can exist between the two concepts—habits and mindset.

## Maps of Content by example

There are different ways you can approach creating a Map of Content. You can use it as an outline as you process your literature notes into your permanent notes. By seeing all the notes for a topic in one Map of Content, you can rearrange them so they make logical sense.

If you are completely new to a topic, consider using a book's table of contents as a guide to organise the Map of Content.

For example, if I were to look at the book *Grit* by Angela Duckworth, she organises the book into the following topics:

- What is grit and why it matters
- Growing grit from the inside out
- Growing grit from the outside in

I like to think of my Maps of Contents in terms of the following:

1. **Definition**—Notes explain what the topic is so anyone can get an understanding of what it is all about.
2. **Benefits**—Notes explain why this is good and how it can be utilised.
3. **Drawbacks**—Notes explain what the problems are and why it can be challenging.
4. **Transition**—Depending on the topic, I would include notes that cover “How to” in order to go from not benefiting from the topic, to benefiting.
5. **Different Roles**—Notes organised by different roles. For example, if it's a topic about Entrepreneurship, then the roles might be for Solopreneurs (single person companies), Startups or Enterprises.
6. **Opinions**—Notes that cover different opinions on the topic.
7. **Ideas**—Notes that connect this topic to other ideas.
8. **Questions**—What questions are unanswered about this topic?

Let's illustrate this with an example. We'll pick the topic Content Creation and outline what a Map of Content might look like and the types of content that it might contain.

## **Content Creation**

### **Overview**

- What it means to be a content creator
- Types of content to create
- Types of content creators
- Creating blogs
- Creating a newsletter
- Creating YouTube content

### **Benefits**

- Benefits to those consuming content
- Benefits of creating content
- Benefits of being a content creator
- Making money as a content creator
- Building a personal brand

### **Drawbacks**

- The challenges of being a content creator
- Long term vs short term content creation
- Content creation and copyright
- Imposter syndrome and content creation
- Burnout

### **How to**

- How to start being a content creator
- Finding your niche
- Finding your audience

- Building a community
- Being an authentic content creator
- Building in Public
- Document, don't create

### **Content creator for...**

- Content creation for entrepreneurs
- Content creation for solo creators
- Content creation for organisations
- Content creation for hobbyist
- Content creation for charities

### **Opinions**

- Inauthentic Influencers
- Over-saturation of content is a race to the bottom
- The ethics of content creators
- The dark side of content creation
- Over reliance on AI in content creation

### **Ideas**

- Content creation to help education
- Content creation in VR worlds
- Storytelling in content

### **Questions**

- Should content creation be taught in schools?
- How do employers feel about their employees being content creators?
- How do you get someone to avoid giving up too soon?

In this example, I've taken a top down approach to how I would perceive a Map of Content would look for the topic content creation. I can use this as a jumping off point to find material that helps me understand the topic more deeply.

The Map of Content will change as my thinking around the subject evolves. As I add more atomic notes, each bullet point will become a gateway for a collection of notes. For example "Finding your audience" might become a whole sub topic with many branching notes underneath.

An alternative way to approach this is to leave the file blank, and only add entries as and when you create permanent notes. This is actually an easier way to approach it, especially if you're unfamiliar with the topic and you don't know what to put in there.

My goal with this example is to give you an idea and let you take inspiration to experiment yourself. There's no right or wrong answer. Doing what works for you is the goal.

## Connecting ideas by example

My favourite aspect of the Zettelkasten is the ability to connect ideas together. This is what transforms it from a collection of notes, to a body of deep thinking and innovation.

Let's explore this through an example. Within my slip box, I have a collection of notes around the topics **Mindset** and **Habits**.

As I write down important notes in my slip box, sometimes I get inspired to think differently about the topic and connect it to other ideas that come to mind. This can happen when I put myself in creative environments, like doing simple physical tasks or taking a walk. Your brain keeps thinking about the problems you have in the background. Many times, I have sudden moments of great insight while walking.

But, your slip box also serves as a purpose for expanding your knowledge even without any new notes to process into it. You can scan your slip box and start asking questions about different notes in the context of each other.

For example, I have a note titled **‘The Emotions of Failure’** which explores how someone with a fixed mindset may have a permanent feeling of failure. They opt to try and repair their self-esteem to feel good, rather than repair their failures.

I also have a note on **‘Growth Mindset Learning’**. If my slip box was more advanced, I may have many other notes around learning.

But taking these two concepts, the emotions of failure and learning, I want to connect these together. I will do this by exploring the following idea:

## **Learning through failure**

Those with a fixed mindset may experience failure while learning and they may conclude that they can’t do it. Learning however is best achieved when you experience failure.

When developing an educational programme, explain up front to your students that you intend to make them hit the limits of their ability, and that their learning will happen through trial and error. Some will interpret this as failure, but you want to ensure they understand that this is deliberate and intentional.

As part of the grading, you want to measure students on their ability to try and fail, rather than their ability to just get it right.

This is where you want to get them to undertake practical exercises sooner than later so that they can learn through the process of trial and error.

### **See also**

1. [[The Emotions of Failure]]
2. [[Growth Mindset Learning]]

As you can see with this example, the two related notes were the spark of inspiration for the idea. The more developed your Zettelkasten gets, the more opportunities you'll have for finding interesting connections.

## **Ask questions to your Zettelkasten by example**

One thing we often talk about when it comes to the Zettelkasten, is being able to ask it questions. Sounds weird right? It's just a bunch of text files, how do you ask it questions? It's not going to answer them, and I'll look like a crazy person.

Think of your Zettelkasten is an externalised form of your own internal thinking. It's the second brain. Comparing this to a computer, our brain is like a processor with RAM. We can store a certain amount of information in our working memory. But ultimately, we need to store everything else in a more permanent memory. Sure, our brain can do this also, but having it stored in a well structured note-taking system is even better.

When we want to ask questions, what we're really doing is taking the processing part of our thinking and trying to answer them from knowledge stored in our permanent storage.

Sometimes the answer will be there, but often it won't. We simply don't know the answer. And that's where things get interesting.

## Asking the right questions

It is important to know how to ask the right questions. You can ask simple questions, like “What was the formula to calculate the area of a circle?”. You might have a note with the answer, and it would be simple to answer.

Other questions might be “What is the difference between ... and ...?” By comparing things by phrasing it as a question, you can answer them more precisely. An example might be “What is the difference between a solopreneur and a bootstrapper?” You might have notes about single founder businesses, and you might have notes about founders bootstrapping their business without external funding. But you haven’t directly compared the two. Now you have the opportunity to do so.

But the most interesting questions are the ones that are almost impossible to answer. The ‘bigger than you’ type of questions. The type of questions that can spark a lifetime of curiosity and research.

You can obviously come up with any number of questions. To keep this simple, focus on questions that:

- **Align with your goals**—They should align with the goals of why you’re doing such research. Without this alignment, it can be a bit academic to be aiming for something that you don’t really know why you’re doing it.
- **Are of deep interest to you**—You want to be interested in the research. Answering questions where your heart just isn’t in it can become unenjoyable.
- **Allow you to scan for opportunities**—You want your questions to be something to consider as you discover new information. Like trying to fit a geometric shape into a box with holes, you want to see if any new information fits an open question you have.

- **Can be answered gradually**—You should be able to break down difficult questions into smaller, simpler questions that can be answered. Over time you'll add pieces to the larger puzzle. In some cases, new research might not give you an answer, but a better question to ask.

Let's look at an example.

On a personal level, I have my own *'why'*—you know, the thing that drives my motivation and focus. It is “To inspire a generation of thinkers and doers”. What I like to do is break this down into a set of questions. They might look like the following:

- What does it mean to inspire a generation of thinkers and doers?
- How do you help someone think deeply?
- What makes a great thinker?
- How does someone learn?
- How does someone teach?
- What makes a great teacher?
- Why do some people think and some people do?
- How do you go from being a thinker to a doer?
- What does it mean to be a doer?
- How can society benefit from action takers who are great thinkers?
- Does being a great thinker benefit society?
- Does being a great thinker differ from being well educated?

And I could go on. But what I'm doing here is exploring the smaller questions, which over time I will keep checking my Zettelkasten to see if I have discovered an answer.

When we get to the more practical questions, such as “What makes a great teacher?”, I can answer this question through the books I read and other material regarding education, learning methods and growth mindset.

As I consider the more abstract questions like “Does being a great thinker benefit society?”, I first need to understand concepts about society and how decision making happens at the macro level.

As you explore your Zettelkasten and ask it questions, consider if they are divergent questions, or convergent questions. I would categorise these as:

- **Divergent questions**—Big, open ended questions that are almost impossible to answer concretely and could be very subjective.
- **Convergent questions**—Smaller, more concrete questions that can have a specific answer which can be backed up with research.

Personally, I like the divergent questions to be broken down into convergent questions. Answers to convergent questions form the atomic building blocks to help me hypothesise what the answer to a divergent question might be.

## Writing a blog article by example

You have put all this work into your Zettelkasten. Now it's time to consider if it's worth sharing your understanding and ideas externally. Blogging is a very low friction way of doing this, and by doing it, you get to reason about your thinking more succinctly.

I personally like to use my questions as a guide to create blog articles. I like to provide a unique insight that tries to say something not previously considered. An alternative might be an explainer blog article. For example “All you need to know about Growth Mindset”.

Since my slip box has notes about Mindset, I will pick the following topic: **How to create a growth mindset workshop for line managers.**

I will create a project note with this title, then look at my ‘**Mindset**’ Map of Content for the notes that I feel will be relevant in order to create the article. This will give me a sense of the structure that I am aiming for.

There are two key points to take away from this approach:

- **You don’t start from a blank sheet of paper**—Before I’ve even had to think about what to write for my article, I have populated it with notes that exist within my slip box. This is a great way to avoid writer’s block by having all the *thinking* done previously, allowing me to focus on the narrative aspect of writing.
- **You shouldn’t need to research anything new**—A good test for the health of your Zettelkasten is whether you can do this task without needing to carry out further research. The real benefit of bottom-up note-taking is that you already have all the research. You only write an article when you have sufficient research in your notes.

# CREATING A BLOG POST OUTLINE

## How to create a growth mindset workshop for line managers

### Introduction

- Who should use this article?
  - [Growth Mindset Companies](#)
  - [Growth Mindset CEOs](#)
  - [Fixed Mindset Companies](#)

OUTLINE THE PROJECT WITH  
EXISTING PERMANENT NOTES  
FROM YOUR SLIP BOX



### What is a growth mindset?

- [Growth Mindset](#)
- [Growth Mindset Attributes](#)
- [Fixed Mindset](#)
- [Fixed Mindset Attributes](#)

### Managers

- [Growth Mindset Managers](#)

### Growth mindset teams

- [Teaching Growth Mindset in Companies](#)

### Growth mindset workshop

- [Growth Mindset Workshop](#)
- [Fixed Mindset Employees](#)
- [Fixed Mindset Managers](#)
- [Group Think](#)
- [Empire Building](#)

Depending on the software I am using, I can preview the contents of my atomic notes within the main editor. By having my notes written atomically, it means I can show only the small blocks of information that I need to start writing.

The diagram illustrates a link in an Obsidian note. On the left, a note contains the text: "WITHIN THE OBSIDIAN APPLICATION, I CAN PUT AN EXCLAMATION MARK IN FRONT OF LINKS TO PREVIEW THE CONTENTS". An arrow points from this text to a link in a project note: "THE LINK'S CONTENTS APPEAR INLINE WITHIN MY PROJECT NOTE". The link is: `![[Slipbox/Growth Mindset|Growth Mindset]]`. To the right, the previewed content is shown, titled "What is a growth mindset?". It includes a sub-header "Growth Mindset", a paragraph: "A growth mindset is the belief that abilities can be cultivated. You don't know how much you can change or how long it will take. It also doesn't mean that because change is possible that you should seek change.", and a "References" section with one entry: "1. [Growth mindset](#)".

Once you have the relevant notes within your article, you can start to construct the narrative around it.

When you're happy with your first draft, you can refine and edit the contents and clean up the article. I personally like to record an audio version of my article as a great way to proofread the contents. This gives me the added benefit of having an audio ready version for those who want to listen to the article instead.

Finally, publish your finished article.

# ADDING NARRATIVE

NOW YOU CAN WRITE YOUR ARTICLE WITH THE NOTE CONTENTS VISIBLE AT ALL TIMES



## Create a growth mindset programme for your team

Creating a Growth Mindset company isn't something that happens by chance. It comes from understanding what the differences are between having a fixed or growth mindset and then educating and mentoring your employees to adopt a growth mindset.

This article is for any manager who is responsible for the personal development and growth of their employees. You'll understand what it means to have a growth mindset and you'll have a starting point to create a Growth Mindset programme for your team.

- Who should use this article?
  - [Growth Mindset Companies](#)
  - [Growth Mindset CEOs](#)
  - [Fixed Mindset Companies](#)

## What is a growth mindset?

When we talk about a Growth Mindset, we often refer to the beliefs and attitudes someone has towards whether they (or someone else) can improve their abilities through dedication, effort and hard work. A person with a growth mindset comes from the perspective that anyone can improve their ability through hard work, while a person with a fixed mindset will often think that ability is unchangeable.

- `![[[Slipbox/Growth Mindset|Growth Mindset]]`

**Growth Mindset**

### Growth Mindset

A growth mindset is the belief that abilities can be cultivated. You don't know how much you can change or how long it will take. It also doesn't mean that because change is possible that you should seek change.

### References

1. [Growth mindset](#)

LIVE PREVIEW OF MY ATOMIC PERMANENT NOTES FOR ME TO WRITE ABOUT IN MY ARTICLE.



# PUBLISHED ARTICLE

THE ARTICLE IS NOW PUBLISHED ONLINE AT  
[HTTPS://MEDA.IO/CREATE-A-GROWTH-MINDSET-PROGRAMME-FOR-YOUR-TEAM/](https://meda.io/create-a-growth-mindset-programme-for-your-team/)



Mindset and Mastery

## Create a growth mindset programme for your team



Martin Adams

Jun 5, 2023 · 4 min read



Growth Mindset Programme by Martin Adams

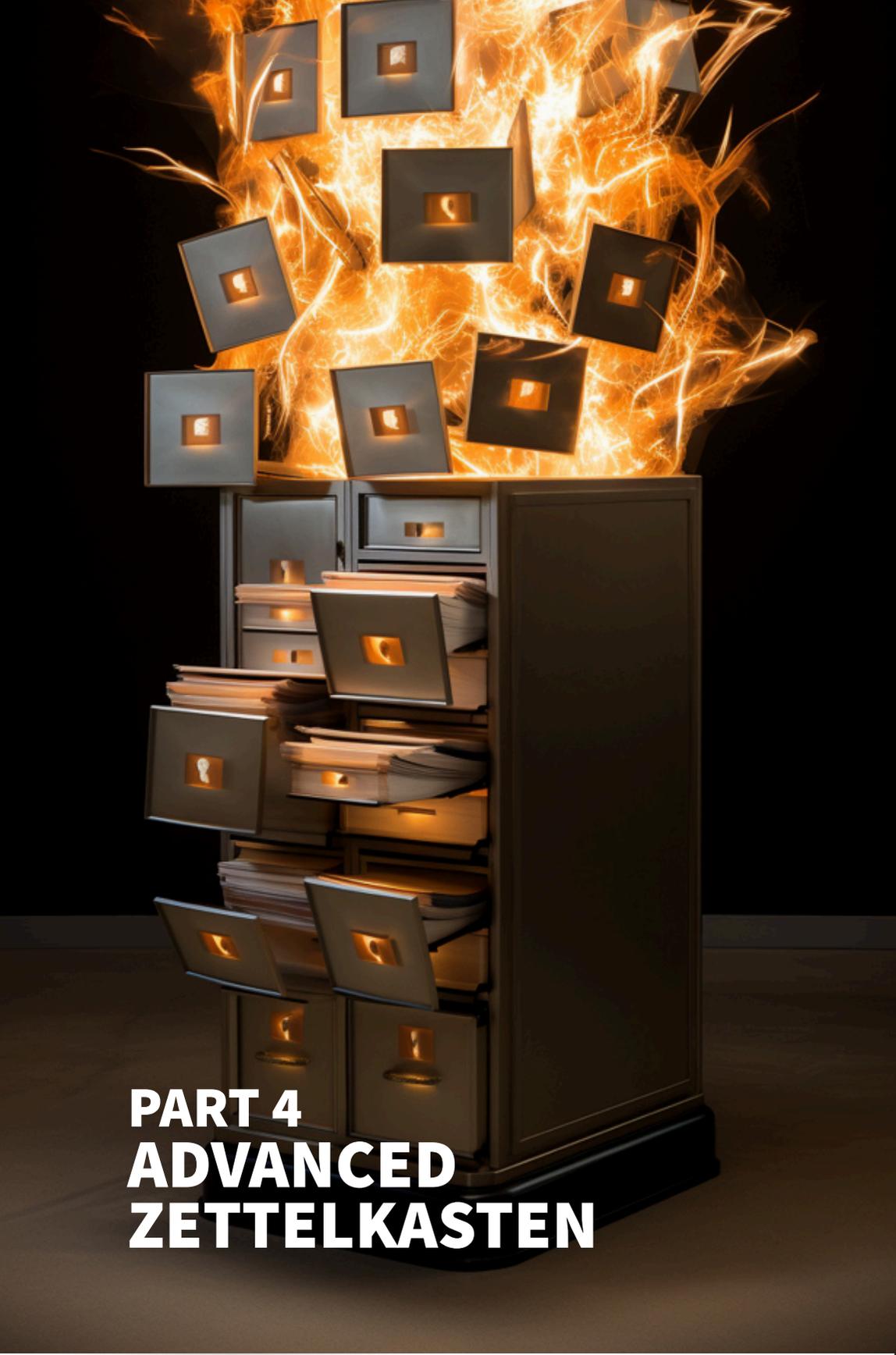
▶ 0:00 / 6:52 ● 1x ◀

Creating a Growth Mindset company isn't something that happens by chance. It comes from understanding what the differences are between having a fixed or growth mindset and then educating and mentoring your employees to adopt a growth mindset.

This article is for any manager who is responsible for the personal development and growth of their employees. You'll understand what it means to have a growth mindset and you'll have a starting point to create a Growth Mindset programme for

As you can see, with this bottom up method of writing articles, the content of the article came from the notes that already existed in my Zettelkasten. If you find that you still need to do first hand research to write your article, it shows your Zettelkasten isn't ready. It also indicates that you're trying to answer a specific question in your article, but your research isn't aligned and hasn't provided the answer.

The real magic happens when you have enough notes in your Zettelkasten that you can create an article. This is the true nature of bottom-up note-taking, where the notes create the published work, not the published work creates the notes.

A futuristic, dark-colored filing cabinet with multiple drawers. The drawers are open, revealing stacks of papers. Each drawer has a glowing orange square handle. The top of the cabinet is surrounded by a large, intense fire or energy field, with several glowing orange square handles floating in the air above it. The background is dark, and the floor is a light gray.

**PART 4  
ADVANCED  
ZETTELKASTEN**

## Creating fleeting notes

How you create your fleeting notes can be a very individual thing. As we read a book, our mind will interpret it based on the things that are important to us. Your previous understanding and general comprehension will have an influence.

*You can never step into the same book twice, because you are different each time you read it—John Barton*

You may revisit the same material in the future and look at it with a completely different perspective. For example, learning about entrepreneurship when you're creating your first startup is very different to learning about it when you are raising capital and managing a team of fifty people.

There is no standard way to create fleeting notes, and if you're a beginner in your Zettelkasten journey, it can be really hard to know where to start.

When you're new to a topic, you may find yourself highlighting lots of passages and trying to capture as much of the information as possible. The problem arises when you look away from the material. You can't recall it. It's like the information evaporates. But read it again, and it all comes flooding back.

This is where you experience recognition of the material, but are unable to recall it. When you're in this situation, you are more of a passive reader. It means you can't really make judgements about what to make notes on and what to leave out. Everything feels important.

But as you gain a deeper understanding of the material, you will be familiar with the concepts and the patterns. So what you highlight from the material might be just the small nuggets that you feel are useful.

These may be elements that you want to refer to in your own writing. It might support your line of thinking, or it might counteract it.

Other times you may highlight a piece of text is when it sparks a tangential thought. You capture it as it may connect with something else that you've been ruminating about. These are great opportunities to make a personal note on what the passage means to you.

To give you a starting point, here's how you can approach your fleeting notes:

- 1. Capture for learning**—Highlight or quote text that is a useful reference. It is a key point that will aid your ability to recall the information when you write literature notes.
- 2. Talk to the author**—When you read, you're really having a conversation with the author. The author is making a point, and you have an opportunity to respond in your notes. Ask questions, call them out, agree or disagree, spot what they've missed or simply celebrate the profoundness or subtleties of their ideas.
- 3. Tangential ideas**—Let your mind wander and see where it goes. If the material sparks an idea, capture it and make a note of what you're thinking. Write what sparked the idea, what the idea is and what you should do to explore it further.
- 4. Action points**—Sometimes what you read really feels like you need to hear it. You need to take action. Capture this. Add a hashtag #action so you can find these easier and make it a priority.
- 5. Analogies**—Humans are great at finding patterns and what we read is no exception. If what you read is analogous to something you're familiar with or a problem you're trying to solve, then make this connection. This is where the beauty of connecting ideas really shines. It helps your understanding and amplifies your thinking.
- 6. Visual references**—Sometimes a diagram or picture explains what needs to be understood clearly. Capture this. If you're using a computer, screenshot it and paste it into your notes. If you're reading a physical book, highlight the images.

## Studying from books

Sometimes, getting into a good book is just what you need. You have a choice though, you can study from a physical book, or from a digital ebook.

### Ebooks

Reading from digital books means you can use the e-reader itself to make notes. This might be Kindle notes if you use the Kindle app.

One of the main limitations with ebooks is whether you are locked into a DRM (Digital Rights Management) ecosystem and whether you can port those books to different formats. If the book has DRM enabled, it means you are limited to the software you can use to read it. Personally, I love reading PDF books using the LiquidText app on the iPad, but this is limited to the availability of books that are in a DRM-free format.

Software like Calibre can help you manage and convert your DRM-free ebook collection to different formats.

### Physical books

Physical books are a great option for avid readers. You get the tactile feel of the book and it provides a more relaxed and distraction free experience.

When I read from books, the first thing I do is break the spine. This may be sacrilegious to some, but my reasoning is simple. I want to make the book my own. I want to gain more value out of the book's content than the paper it is written on. A worn book gives me pride that I've experienced it.

When I was in my early twenties, I would collect many books on topics that interested me. These were art, programming and design books. However, I hadn't really caught my learning bug then. They

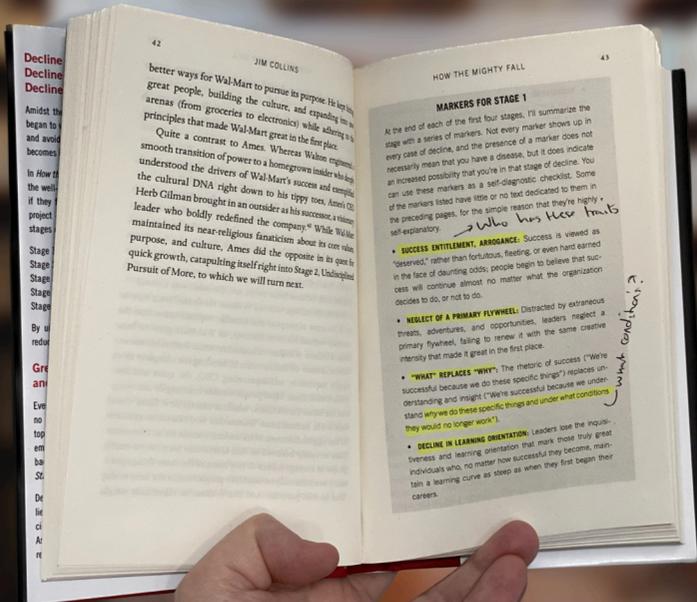
would be aspirational purchases that allowed me to feel like I was moving towards a goal, without ever doing any work.

Having lots of books is a huge responsibility. They were problematic when moving house as they were heavy and plentiful. And I simply didn't have enough space to store them. As a result they were moved to my garage, which over time had a leaking roof and mould. The books were ruined.

## Tsundoku

*Tsundoku is acquiring reading materials but letting them pile up in one's home without reading them.*

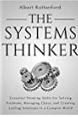
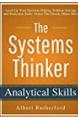
I also use a highlighter in my books and write in the margins. This means I can capture the highlights with minimal effort and keep in the flow of writing.



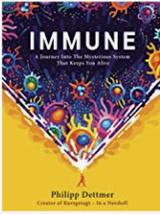
## STUDYING FROM BOOKS

Alternatively, making notes on a separate notepad is a great option. This is not something I do personally as I like to sit on the sofa when I read.

Nowadays I keep my physical book collection to a minimum and opt for the Kindle version where possible. I still like to collect my own library of books. I will often add these to an Amazon wish list and watch for a price drop.

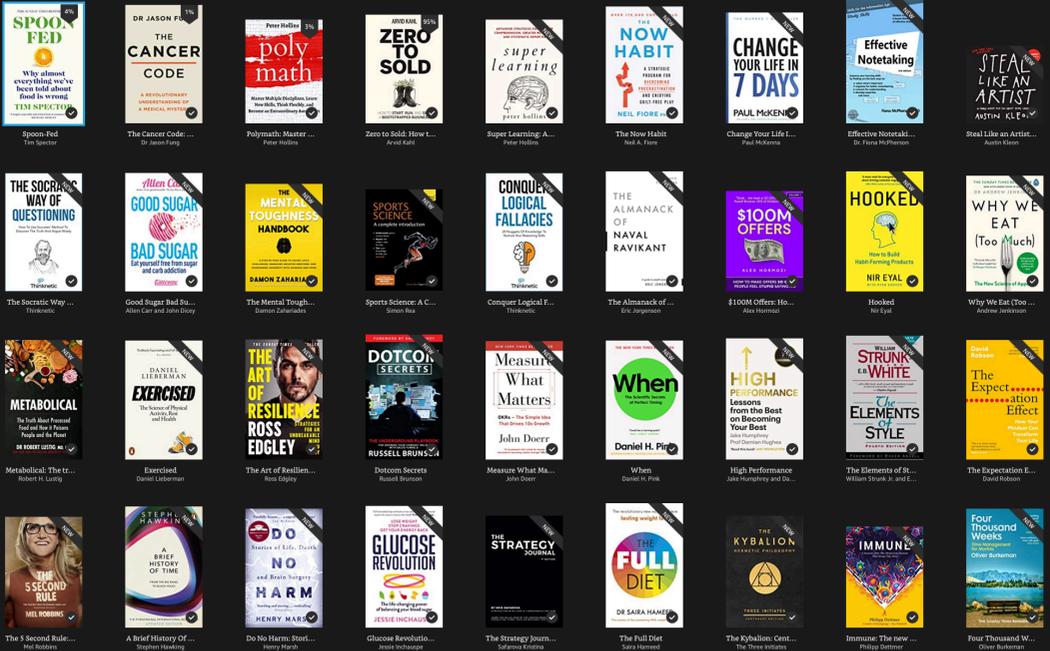
	<p><b>The Field Guide to Understanding 'Human Error'</b> by Sidney Dekker (Kindle Edition) ★★★★☆ ~ 233 £18.87</p>	<p>Item added 28 April 2022</p> <p>Buy now with 1-Click</p> <p>Move ▼ Remove</p> <p>Add comment, quantity &amp; priority</p>
	<p><b>The Systems Thinker: Essential Thinking Skills For Solving Problems, Managing Chaos, and Creating Lasting Solutions in a Complex World (The Systems Thinker Series Book 1)</b> by Albert Rutherford (Kindle Edition) ★★★★☆ ~ 275 £4.41 Price dropped 4% (was £4.59 when added to List)</p>	<p>Item added 16 June 2022</p> <p>Buy now with 1-Click</p> <p>Move ▼ Remove</p> <p>Add comment, quantity &amp; priority</p>
	<p><b>The Systems Thinker - Analytical Skills: Level Up Your Decision Making, Problem Solving, and Deduction Skills. Notice The Details Others Miss. (The Systems Thinker Series Book 2)</b> by Albert Rutherford (Kindle Edition) ★★★★☆ ~ 167 £4.41 Price dropped 2% (was £4.49 when added to List)</p>	<p>Item added 16 June 2022</p> <p>Buy now with 1-Click</p> <p>Move ▼ Remove</p> <p>Add comment, quantity &amp; priority</p>
	<p><b>The Extended Mind: The Power of Thinking Outside the Brain</b> by Annie Murphy Paul (Paperback) ★★★★☆ ~ 537 8 Used &amp; New from £14.76</p>	<p>Item added 18 June 2022</p> <p>See all buying options</p> <p>Move ▼ Remove</p> <p>Add comment, quantity &amp; priority</p>

Or I'll check out the daily and monthly deals where some great books that I'm interested in will be extremely cheap.

<p>Best Seller</p> 	<p><b>Immune: The bestselling book from Kurzgesagt - a gorgeously illustrated deep dive into the immune system</b> by Philipp Dettmer   Sold by: Amazon Media EU S.à r.l.   2 Nov 2021 ★★★★☆ ~ 6,694 Kindle Edition Limited time deal £0.99 <del>£25.00</del> Available instantly Buy now with 1-Click ®</p>	<p>Great On Kindle: A high quality digital reading experience.</p> <p>Ages: 12+ years, from customers</p>
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## STUDYING FROM BOOKS

Over the years my digital book collection has grown to more than 300 books. I know I will never be able to read all of these. But I consider it as my research library, where I can pick any topic and I have a range of viewpoints on it that I can explore. If I'm feeling uninspired, I can explore my library and see what draws me in. Then I will have a whole new range of ideas and avenues to think and write about.



The books I choose are mostly in the non-fiction genre as that's what I enjoy the most. I usually decide on whether to get the book based on the general reviews on Amazon. A rating of 4.5 or more signals that the book is thought provoking and not just a recycling of existing ideas.

I like to get books that either help me go deeper into a subject I'm currently interested in, or help me go broader to open my mind to new ideas. Usually the more practical books I have are on the topics of

business, entrepreneurship and wellbeing. But the books that I've enjoyed the most are the specialist ones, such as critical thinking and becoming a better teacher and communicator.

## **Storing your book's fleeting notes**

You may be wondering. Where do you store your book notes when they're in the physical book? Your highlights and annotations within the book itself are now ready to be processed into your literature notes.

But you may have opted to make notes independently outside of the book you're reading. These may be paper notes in a notepad, or digital notes using apps like Good Notes on the iPad. Either way, you want to collate these together into your system ready for processing into your literature notes.

You can always take a photo of your handwritten notes and store the photographs in your note-taking system. Or you can simply use the physical notes as you write your literature notes. Or type them up as fleeting notes. Do what works best for you.

Once you have processed your fleeting notes, you can safely put them away in a filing system if you have one. This is equivalent to archiving them once they're complete within a digital system.

## **Read multiple books at a time**

If you're like me, it can take months to get through a whole book. If the book is short and really exciting, then I know I can get through it within about a week. But other times, I'm just dipping in and dipping out.

I sometimes get a feeling of guilt that I must complete the book before I can move onto something else. I think this is the wrong approach. Books work for me, not the other way around.

The best advice I can give here is to plan how you want to approach the book first. Rather than create one large set of fleeting notes for a whole book, break it down into chapters. Then you only need to commit to a full or partial chapter in your reading session before bringing the information through to your Zettelkasten.

By doing it this way, you can start to prioritise the different books you want to study to get the most value out of them sooner than later.

There's no easy way to do this, but I would recommend creating a book note within your note-taking system. Within this note, outline the key chapters and link to the chapter's fleeting notes as you create them. You will be able to see progress of how much of the book you've covered and what you're yet to cover.

Let's look at an example. My high level goal is to become a better teacher which I can apply to my writing and YouTube channel.

I have the following books on the topic within my Kindle library.

1. *Super Learning* by Peter Hollins
2. *Effective Notetaking* by Dr. Fiona McPherson
3. *The Socratic way of Questioning* by Thinknetic
4. *The Self-Learning Blueprint* by Peter Hollins
5. *How to Write Non-Fiction* by Joanna Penn
6. *Words that Change Minds* by Shelle Rose Charvet
7. *How to Read A Book* by Charles Van Doren and Mortimer J. Adler
8. *How to Teach Anything* by Peter Hollins

I can create these book entries in my note-taking system. It can go one step further and enter the chapters for the book. This allows me to create a reading plan based on the relevant chapters out of multiple

# READ BY TOPIC NOT BY BOOK

CURATE A READING LIST BASED ON ANY  
CHAPTERS OF INTEREST

## Reading list about learning

### Memory

#### Chapter 2. Memory Retention

- [\[Forgetting\]](#)
- [\[The Forgetting Curve\]](#)
- [\[The Study Cycle\]](#)
- [\[Retrieval Practice\]](#)
- [\[Spaced Repetition\]](#)
- [\[Cramming Best Practices\]](#)

#### Chapter 4. Headings highlight structure

- [\[Do headings help memory?\]](#)
- [\[How do headings help memory?\]](#)
- [\[Learning to use the topic structure strategy\]](#)
- [\[Do some individuals benefit more from headings than others?\]](#)
- [\[Review questions\]](#)

EMBED THE DESIRED CHAPTERS TO  
READ AS ENTRIES IN YOUR  
READING LIST

IN THE OBSIDIAN APP, USE ! TO PREVIEW THE EMBED,  
AND ^ TO LINK TO THE SPECIFIC CHAPTERS

BOOK'S PLACEHOLDER FLEETING  
NOTES ORGANISED BY CHAPTER IN  
IT'S OWN MAP OF CONTENT

## Super Learning Book

### Chapter 1. Fertile Conditions to Learning

- [\[\[The Human Attention Span\]\]](#)
- [\[\[Learning Over Short Bursts of Time\]\]](#)
- [\[\[Concepts Before Facts, Understanding Before Memory\]\]](#)
- [\[\[Aim to Be Frustrated \(Yes Really\)\]\]](#)

### Chapter 2. Memory Retention

- [\[\[Forgetting\]\]](#)
- [\[\[The Forgetting Curve\]\]](#)
- [\[\[The Study Cycle\]\]](#)
- [\[\[Retrieval Practice\]\]](#)
- [\[\[Spaced Repetition\]\]](#)
- [\[\[Cramming Best Practices\]\]](#)

### Chapter 3. Active Learning Techniques

- [\[\[Elaborate Interrogation\]\]](#)
- [\[\[Feynman Technique\]\]](#)
- [\[\[Interleaved Practice\]\]](#)

## Effective Notetaking Book

### Chapter 4. Headings highlight structure

- [\[\[Do headings help memory?\]\]](#)
- [\[\[How do headings help memory?\]\]](#)
- [\[\[Learning to use the topic structure strategy\]\]](#)
- [\[\[Do some individuals benefit more from headings than others?\]\]](#)
- [\[\[Review questions\]\]](#)

### Chapter 5. Summaries

- [\[\[Topical summaries and overviews\]\]](#)

In the illustration, I have organised which books talk about memory. This means I can focus my reading around this topic if that is an area I am particularly interested in.

## Break the book into chunks

Reading books one at a time to create your notes can be a laborious process. Sometimes it can be quite boring. Sure, some books are captivating and you rattle through them, but some books are monstrous and simply take a long time.

I don't know about you, but I find I have a pressure to read the whole book before moving on to the next. This can result in reading guilt when you fail to progress through the book quickly enough. Do you power through or decide to abandon a book for another? Or worse, put off reading because you feel you have to complete it.

However, to read effectively, you need to think differently about your relationship with your books. In the book *How to Read a Book* (ironic I know), the authors cover the different types of reading.

In summary they are:

- **Elementary reading**—The basic level of where you focus on understanding the literal meaning of the words. This is the type of reading that is great for recognising the concepts as you read it, but not great for recall where you can teach it to others.
- **Inspectional reading**—Scan the book to get an overview of the structure, contents and overall argument.
- **Analytical reading**—A deeper level of reading where you examine the ideas and arguments looking for flaws and strengths.
- **Syntopical reading**—Comparative reading in relation to other books on the same topic.

STUDYING FROM BOOKS

- **Evaluative reading**—Make a judgement about the book considering its merits and shortcomings.

The Zettelkasten can help you get to the more advanced types of reading. The analytical reading is carried out in your literature notes. Syntopical reading is carried out in your permanent notes. Evaluative reading is carried out in your slip box as you evaluate your permanent notes to come to a conclusion.

You may have your library of books in various places. Some may be in your Kindle library and others on your bookshelf. The goal is to break them down into smaller chunks so that you can create a more granular reading plan.

The benefit is that you can start to read across many books simultaneously rather than one book at a time.

**Life hack: Converting Kindle Table of Contents to Markdown**

What if we could take the table of contents from a book and convert this to a Map of Content for our notes on the book? Each chapter can then be its own fleeting note within our note-taking software. We can achieve this with a hack to convert a screenshot of the book’s table of contents to a Map of Content. Please note that the method outlined here is for macOS and the purpose is to illustrate different ways to structure your fleeting notes.

Here is the table of contents of a book within the Kindle app.

SUPER LEARNING: ADVANCED STRATEGIES FOR QUICKER COMPREHENSION, GREATER RETENTION, AND SYSTEMATIC EXPERTISE (SCIENCE OF ACCELERATED L...

**Table of Contents**

TABLE OF CONTENTS

INTRODUCTION

CHAPTER 1. FERTILE CONDITIONS TO LEARNING

THE HUMAN ATTENTION SPAN

LEARNING OVER SHORT BURSTS OF TIME

CONCEPTS BEFORE FACTS, UNDERSTANDING BEFORE MEMORY

AIM TO BE FRUSTRATED (YES, REALLY)

CHAPTER 2. MEMORY RETENTION

FORGETTING

THE FORGETTING CURVE

THE STUDY CYCLE

RETRIEVAL PRACTICE

SPACED REPETITION

CRAMMING BEST PRACTICES

CHAPTER 3. ACTIVE LEARNING TECHNIQUES

ELABORATIVE INTERROGATION

FEYNMAN TECHNIQUE

INTERLEAVED PRACTICE

CHAPTER 4. MAKE LEARNING SECONDARY

THE SIX FACETS OF UNDERSTANDING

PROBLEM-BASED LEARNING

GAMIFICATION

CHAPTER 5. TEACHING TO LEARN

THE LEARNING PYRAMID

THE PROTÉGÉ EFFECT

GIVE GOOD FEEDBACK

DEEPER INFORMATION PROCESSING

DEEPER INQUIRY

THE PQ4R METHOD

CHAPTER 6. MISTAKES IN LEARNING

LAZY READING

FIXED VERSUS GROWTH: WHAT’S THE RIGHT MINDSET?

THE MYTH OF TAILORING LEARNING STYLES

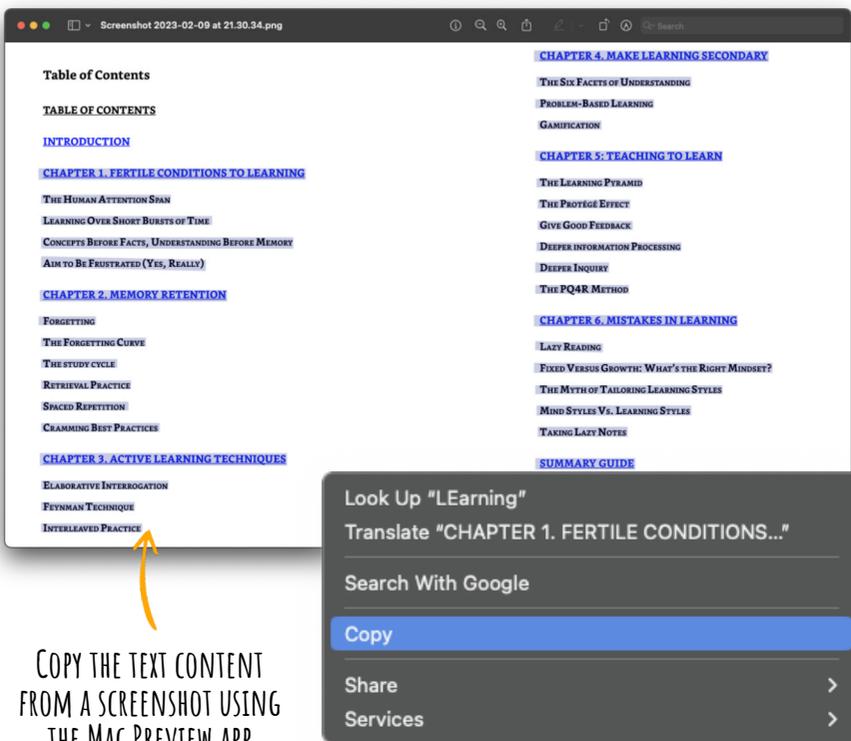
MIND STYLES VS. LEARNING STYLES

TAKING LAZY NOTES

SUMMARY GUIDE

Now this has a few problems. Firstly, we can't copy and paste the text into our note editor. Secondly, the formatting isn't quite how we would want it. And thirdly, it's written in capital letters and we would want it as a sentence case.

Using a Mac computer, it's possible to screenshot the table of contents, open up the image in the Preview app, and simply copy and paste the text using its built-in Optical Character Recognition (OCR).



COPY THE TEXT CONTENT FROM A SCREENSHOT USING THE MAC PREVIEW APP

The problem when you paste the text is that it looks awful.

**ToC**

CHAPTER 1. FERTILE CONDITIONS TO LEARNING

THE HUMAN ATTENTION SPAN

LEARNING OVER SHORT BURSTS OF TIME

CONCEPTS BEFORE FACTS, UNDERSTANDING BEFORE MEMORY AIM TO BE FRUSTRATED (YES, REALLY)

CHAPTER 2. MEMORY RETENTION

FORGETTING

THE FORGETTING CURVE

THE STUDY CYCLE

RETRIEVAL PRACTICE

SPACED REPETITION

CRAMMING BEST PRACTICES

With a bit of playing around, we can use AI to format this as close to how we want it as possible. ChatGTP can be a great aid.

Simply ask it to format the contents how you want it with a prompt like the following:

**Hey, I'm going to give you an example TOC I want you to format some pasted text into. It looks like this:**

**# Chapter 1. Title**

- ![[Toc Entry]]**
- ![[Toc Entry]]**

**# Chapter 2. Title**

- ![[Toc Entry]]**
- ![[Toc Entry]]**

**Where the text "Toc Entry" is the entry. Keep the outer square brackets from my example.**

**Then I'm going to paste some oddly formatted table of contents for you to format as above. Please make the text sentence case.**

Then paste in the extracted table of contents, and with a bit of luck, the result should be just as you want. Getting the exact right prompt can take a bit of trial and error. While the AI is very good, it's not perfect.



Here's the formatted TOC as you requested:



lua

Copy code

```
# Chapter 1. Fertile Conditions to Learning
- ![[The Human Attention Span]]
- ![[Learning over Short Bursts of Time]]
- ![[Concepts Before Facts, Understanding Before Memory Aim to be Frustrated]]

# Chapter 2. Memory Retention
- ![[Forgetting]]
- ![[The Forgetting Curve]]
- ![[The Study Cycle]]
- ![[Retrieval Practice]]
- ![[Spaced Repetition]]
- ![[Cramming Best Practices]]

# Chapter 3. Active Learning Techniques
- ![[Elaborative Interrogation]]
- ![[Feynman Technique]]
- ![[Interleaved Practice]]

# Chapter 4. Make Learning Secondary
- ![[The Six Facets of Understanding]]
- ![[Problem-Based Learning]]
- ![[Gamification]]
```

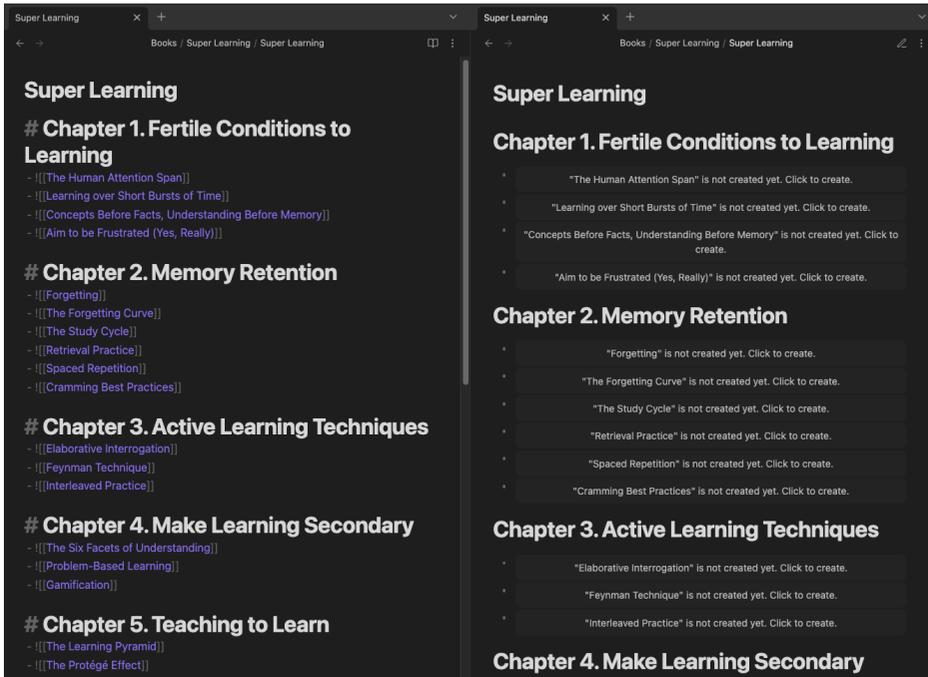
The end result is pretty excellent. The only small adjustment needed was the text recognition in the Preview app failed to recognise one of the chapters as two chapters. But that's easy to clean up manually at the end.

I can now add this into software like Obsidian in my fleeting notes folder where I'll capture my notes as I read the book.

A few points about why I chose this formatting.

## STUDYING FROM BOOKS

1. The hyphens are sub chapters meaning it's nice to break it down into a bullet point list.
2. I've made them their own links, which means I can create a new Map of Content file for just the chapters on specific themes across different books I want to read.
3. I have put an exclamation mark in front of each link so that Obsidian will preview the contents when in reader mode. This allows me to see which chapters I have completed and which ones I am yet to read.



The goal is to break the book down into smaller chunks which you can now read in isolation. You can create a single fleeting note for each chapter.

It now means you can start to track your book progress more closely with your notes. You can switch between books without feeling the guilt that you're abandoning your current book.

This creates a workflow that allows you to be more fluid and explore multiple topics at the same time. This is what the Zettelkasten excels at. You can go broad across topics, then deep on the ones that are of particular interest. You don't have to go deep on every topic as they appear.

It's at this point that I realise the tools and techniques to achieve this are awkward and time consuming. It has given me much thought on how this could be solved with my note-taking app Flowtelic. I want you to have your digital library at your fingertips, with a focus mode that breaks down the daily reading into small chunks. Small consistent progress that compounds over time.

## Studying from videos

In around 1995, when I was 13, I was one of the lucky few kids who not only had a personal computer at home, but also Microsoft Encarta—the multimedia encyclopaedia. There was no Internet like we are used to today, and certainly no YouTube.

Video has been one of the great enablers in education. With platforms like YouTube, you can learn nearly anything you desire. And, there's no shortage of other platforms where you can purchase video courses.

While video is amazing at visually showing the ins-and-outs of the content, it suffers from the following issues:

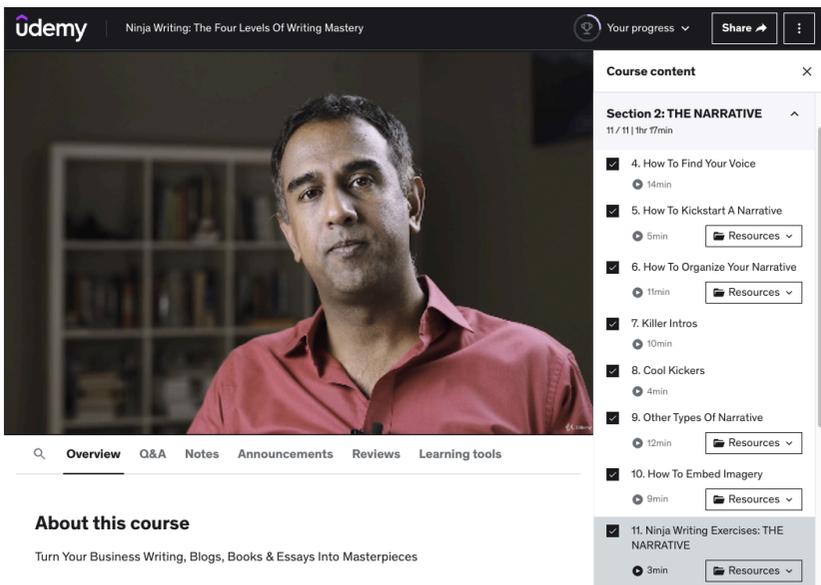
1. There's too much information to choose from
2. You have to watch the video to know if it's any good
3. You can only watch it linearly, meaning you can't scan the content or skip around easily

4. It's a passive way of learning—we just sit there and watch—meaning the information will fade quickly
5. It's hard to find the relevant parts for revision
6. You can't scribble notes on the screen

So much valuable information is being wrapped up in video format. We need a way to crack it open and extract the knowledge into our notes. Without this, the video will become a faint memory and we fail to exploit its teaching.

You're most likely wanting to take notes from educational videos where you're hoping to learn more deeply from the content creator's teaching. However, studying from video doesn't always have to come from educational content. You could watch cinematic films, documentaries or any other fictional content. Your motivation may be to do an analysis or criticism of the video.

Let's assume you've purchased a video on a platform like Udemy.



Video learning platforms will often have a way to break the video course into manageable chunks. Each video usually runs from a few minutes to around the 15 minute mark. This makes it easier for you to create fleeting notes from the video course.

Personally, I prefer to use the outline method where I create bullet point notes as I watch the video. I try to capture the key point in the words of the speaker. This is akin to highlighting in a book. I'm extracting the phrases from the content so I can review these in much more detail when I make my literature notes.

## H1 Mindset 101

#Impact Theory#

#topic/mindset

#projects/growth mindset#

#capture

## H2 Mindset 101

You need a growth mindset instead of a fixed mindset

### \*Believe\*

- We are all roughly average
- Decide to believe that your energies are going to be reward
- Average is enough
- Belief accrue by accident, people aren't taking control of that
- Don't realise these are beliefs I've chosen to believe
- Believe that beliefs are changeable
- The brain can change
- The brain changes via disciplined practice
- Action cures all
- Always a solution
- Yet is real - not good at ... yet
- The human potential is nearly limitless

*/Henry Ford/*

*/Whether you believe you can, or believe you can't, you're right |*

I do have one advantage however, and that is I can touch type. I can copy the text in near real time as it is spoken in the video. Only when I fumble on a spelling mistake do I need to pause, correct, rewind 20 seconds and continue. If you don't touch type, then be prepared for the process to be slower. But don't be afraid to pause and get your thoughts down.

If there is a diagram on screen, I will often use the Mac screenshot hotkey `Cmd + Ctrl + Shift + 4`, select the area and paste it into my notes. It takes less than 2 seconds to grab a screenshot like this. For Windows users you can use the Snipping Tool with the Windows logo key + `Shift + S`.

This is helpful when the concepts being discussed are difficult to put into words and a picture is much better. I may choose to recreate these later in my literature notes if it is something I feel might be useful for any of my own content creation.

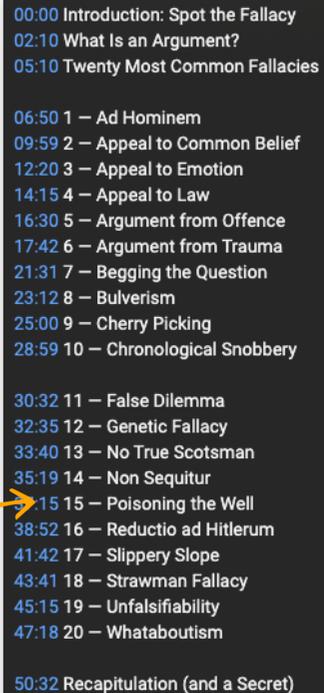
A word of warning however, with platforms like Udemy, due to the Digital Rights Management (DRM) restrictions, you are not allowed to screenshot the video. The video portion will be blacked out.

However, there's nothing stopping you taking a photo of your computer screen with your smartphone and pasting that in.

Here is an example of how I make notes from YouTube videos. The video in question is called *20 Most Common Logical Fallacies* by Dr. Jason Lepojärvi <https://www.youtube.com/watch?v=EYIlGsL4W4E>

YouTube is very good at allowing content creators to add chapter markers. The creator can annotate the sections in the description of the video.

USE YOUTUBE VIDEO TIMESTAMPS TO ORGANISE YOUR NOTES



00:00 Introduction: Spot the Fallacy  
 02:10 What Is an Argument?  
 05:10 Twenty Most Common Fallacies

06:50 1 – Ad Hominem  
 09:59 2 – Appeal to Common Belief  
 12:20 3 – Appeal to Emotion  
 14:15 4 – Appeal to Law  
 16:30 5 – Argument from Offence  
 17:42 6 – Argument from Trauma  
 21:31 7 – Begging the Question  
 23:12 8 – Bulverism  
 25:00 9 – Cherry Picking  
 28:59 10 – Chronological Snobbery

30:32 11 – False Dilemma  
 32:35 12 – Genetic Fallacy  
 33:40 13 – No True Scotsman  
 35:19 14 – Non Sequitur  
 35:15 15 – Poisoning the Well  
 38:52 16 – Reductio ad Hitlerum  
 41:42 17 – Slippery Slope  
 43:41 18 – Strawman Fallacy  
 45:15 19 – Unfalsifiability  
 47:18 20 – Whataboutism

50:32 Recapitulation (and a Secret)

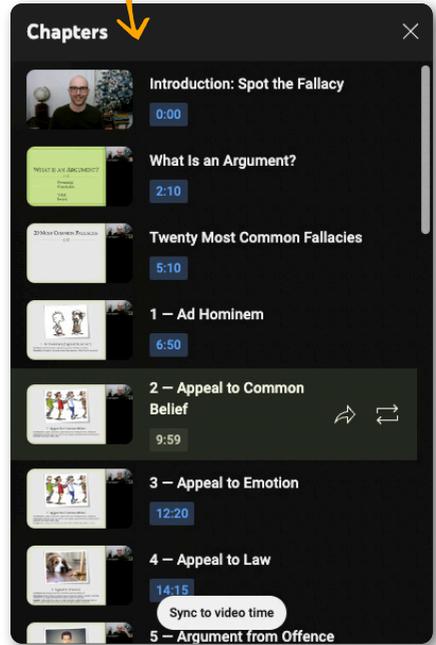
## STUDYING FROM AUDIOBOOKS

We can now see the chapters in the sidebar, but also in the timeline of the video.

FULL VIDEO OUTLINE IN THE  
YOUTUBE PLAYER



SEE THE CHAPTERS IN THE VIDEO TIMELINE



Get a feel for the content prior to watching the video as this will make it easier for you to know where it is heading in your notes.

If the creator of the video hasn't put chapter markers in, YouTube may use artificial intelligence to automatically generate them based on the contents of the video. This is how you can see video chapters in search results on Google where the content creator didn't put the chapter markers in.

## Studying from audiobooks

Audiobooks are an amazing way to expand your knowledge while multitasking with other activities. I like to visualise the cliché travelling sales people listening to self help audio cassettes to find success. Today's modern equivalent is to be able to listen to audiobooks while travelling, exercising, or carrying out household chores.

Audiobooks, like video, also suffer from the linear nature of which it can be listened to. You can't really go fast, or skip around the content.

For this reason, my primary use for audiobooks is to introduce myself to new topics at the conceptual level. This has been fantastic to help open my mind to new ideas and new concepts. I like to think of it as reprogramming my mindset.

That said, it's really what drew me to seek out a note-taking method such as the Zettelkasten. I felt the information was disappearing and I wasn't able to recall it when I wanted to use it in my own content creation. However, even without this it serves me well when I have an unusual situation and I need to call upon some way to think about it to make better decisions. But to teach someone else what I knew, this was hard.

So how have I overcome this? My listening is always when I'm doing another activity, which is mostly driving. I can't simply open a notes app and start typing. I've attempted to use the bookmark feature in Audible. However, you can't 'highlight' the specific phrase in the audio and add an annotation. When I go back to the bookmarks later, they no longer make sense.

The best solution I have found does require having an Apple Watch. I have found that by adding the voice memo shortcut to the watch face, it's effortless to record fleeting notes as a voice memo, ready for writing up on my computer later.

The type of notes I record are either insights from the audiobook or podcast, or ideas that pop into my head. Sometimes a book has so many ideas I want to capture that I end up making a rapid succession of voice memos.

This method has worked extremely well for long dives.

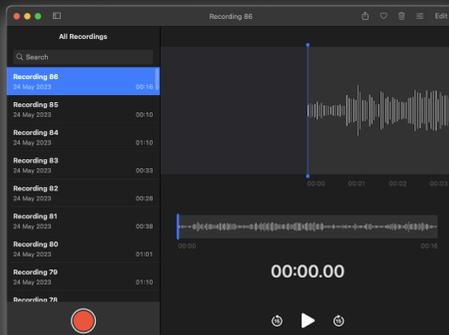
Of course, the downside is that you can't go deep with a subject. This is why I decided to use audiobooks to learn broadly, and leave ebooks and other formats for deep learning.

# RECORDING VOICE MEMOS

WITH THE VOICE MEMO SHORTCUT ON THE WATCH FACE, IT'S EFFORTLESS TO START RECORDING A VOICE NOTE



RECORD YOUR FLEETING NOTE AND MENTION WHICH BOOK OR CHAPTER YOUR IDEA WAS INSPIRED FROM



TRANSCRIBE YOUR VOICE NOTES TO FLEETING NOTES IN YOUR ZETTELKASTEN WHEN YOU'RE BACK AT YOUR COMPUTER

On occasion I have found an audiobook so good that I have purchased the Kindle ebook version as well. I would listen throughout the day, but read the kindle version in the evening to capture my notes.

Does this mean I'm reading the book twice? Yes, in a way, but it's a much easier read the second time.

## **Book summaries**

Another technique that I have found extremely useful is to listen to the audiobook to get the 'full fat' version of the content, then use a book summary to extract fleeting notes.

I find the audiobook allows me to consider the content more broadly. My mind can make connections with many other ideas. This is often helped by listening while moving around. I am much more creative when going for a nice walk, and listening to audiobooks at the same time can be very creatively inducing.

But when it comes to making notes, I can choose a book summary service where it's already condensed. One such service I use is called Shortform who have previously sponsored my YouTube channel. I've enjoyed their service so much I even became an affiliate. If you're curious to check them out, and want to support my work, here is my affiliate link:

<https://shortform.com/martin>

What I like about Shortform is that they provide single page summaries, then more detailed summaries of each chapter. The author of the summaries will even insert their own notes and observations with regards to other books as well. It's almost like they too use the Zettelkasten system behind the scenes.

The downside however is that their book selection is limited to the most popular non-fiction books. Great if you want to read popular books like *Atomic Habits*—but not so great if you can't find the book you're interested in.

Do be mindful that doing it this way is optimising your time and energy. Spending more time with the original book and making your own original notes is a superior solution. By relying on book summary services you are experiencing an already filtered version through someone else's thinking. It's great for the high level content, but I wouldn't recommend it if you want to become a deep thinker on a given topic. So use it when it makes sense for your time, but not for the books you really care about.

## Sequencing your notes

Since one of the core themes of the Zettelkasten is to have your notes written atomically, it raises a very simple problem. What if the topic needs to span multiple notes?

There are multiple considerations that arise when it comes to numbering your notes. Firstly, in a digital system, you don't actually need to number them. The filename of each note can be the reference and you can easily search for it.

This does introduce a problem however. What if you change the name of a file? Should the software automatically update every reference to it?

That's when the question of numbering comes up. How do you number your notes, and what does it even mean to number them?

## The Folgezettel system

The Folgezettel system refers to a manual numbering system that allows you to increment from one note to the next, but also insert notes at any point and not have to renumber each note in the sequence to fit it in.

If you look up the Folgezettel system online, you'll find that the topic talks about what it means, whether Niklas Lumnán used it, and how it applies in a digital sense.

Personally, I consider this semantics. I want to understand the purpose of a numbering system and whether it is useful in my own note-taking.

At its core, it's basically an alternating system between letters and numbers. Increment the numbers to represent the next note in the sequence. Add a letter when you want to branch.

For example, I may have a sequence of notes about Logical Fallacies.

- 100 Ad Hominem
- 101 Appeal to Common Belief
- 102 Appeal to Emotion
- 103 Appeal to Law
- 104 Argument from Offence

Now what if I want to insert a note about `Emotional Blackmail` at the 102 point to speak about the `Appeal to Emotion`, but not break the flow of notes in the sequence. I can insert a child note as such:

102a1 — now I have a new subsequence which can continue its own thread of notes by using 102a2, 102a3, 102a4, etc.

- 100 Ad Hominem
- 101 Appeal to Common Belief
- 102 Appeal to Emotion
- 102a1 Emotional Blackmail
- 103 Appeal to Law
- 104 Argument from Offence

If I want to create a separate subsequence, I can use 102b1. For example:

- 100 Ad Hominem
- 101 Appeal to Common Belief

- 102 Appeal to Emotion
  - 102a1 Emotional Blackmail
    - 102a2 When emotional blackmail backfires
  - 102b1 Examples of Appeal to Emotion
    - 102b2 Appeal to Emotion used in Politics
- 103 Appeal to Law
- 104 Argument from Offence

With this notation, it's possible to create a full, ever growing tree of notes without ever having to rewrite a single unique identifier.

## **Limitations of the Folgezettel system**

One challenge that has arisen with the Folgezettel system is what do you do if you want to insert a note at the beginning. This is problematic because you can only branch off an existing note, but you cannot branch before.

This is also true for any branch. You cannot insert a note at the top of an existing branch.

I don't claim to know the answer here. It's a neat system for being able to have immutable numbers for your notes in a physical system. Within a digital note-taking system however, the need for such a numbering system is less relevant as you have the ability to find and link notes by almost any dimension. This could be a text search, use of hashtags, follow links and many more. This is not practical in an analogue note-taking system.

## **Datetime system**

An alternative approach would be to use a timestamp in the format of YYYYMMDDHHMMSS. For example: 202302141030—representing 10:30am on 14th February 2023.

This really only achieves two things. The first is that every note can have a unique identifier without clashing. The second is that you can use it to sort the notes based on the time of creation. The greater the number, the more recent it is.

But that's about it. It doesn't help us string notes together in a sequence or express the relationship between a note and the sub threads of ideas.

It merely serves as a purpose to link to a note by an identifier in a piece of software, and not much more.

## **Choosing the right numbering system**

While there will undoubtedly be more ways to number your notes, I would prefer to opt for a system like the Folgezettel. It only solves the problem of having unique note identifiers along with thinking of your ideas in threads of thoughts. This can be very helpful to ensure they remain unchanging across the multiple notes.

The added benefit of the Folgezettel system is that you can easily apply it to an analogue Zettelkasten.

Don't feel that you do need to implement a numbering system. You can use the note title as the unique identifier and Maps of Content to sequence the notes in a hierarchical structure.

## **Referencing**

We live in a changing world where information is flowing at a rate faster than ever before. Arguments are made with the utmost convincing statements, but yet, the truth doesn't always lie in plain sight.

Referencing is a vital tool for any thinker so that the ideas you have can be fully supported by the material that were the foundation of those ideas. Without it you lose track of where you gained your

insights and understanding. It's not easy to revisit the source material to make sure you understand it correctly.

Creating a referencing system is extremely important to any knowledge system. If you work in academia, this will be a key requirement of any papers and journals you write.

## **Bibliography references**

Academic references are what often comes to mind when we think about references. They may be citations to a research study, or a bibliography that lists all the sources in a piece of writing. There are different methods to format your references, and if you're studying at a university, they may indicate which is their preferred method.

What's important is that you have a system that allows you to track your references so that it becomes easy to use when you need it.

You can choose to use your note-taking app to record your references, or use a dedicated reference manager like the free software Zotero.

# EXTERNAL REFERENCES

A BOOK NOTE ABOUT THE BOOK MINDSET



## Mindset: How You Can Fulfil Your Potential

Author [Dr. Carol Dweck](#)  
ISBN: 1-78033-200-9  
Published Date: 2 Feb 2012

### Reference

Dweck, Carol. /Mindset: How You Can Fulfil Your Potential/, 2012. ^9d749d



A BIBLIOGRAPHY STYLE REFERENCE FOR THIS BOOK



ANCHOR IDENTIFIER SO YOU CAN ADD JUST THE BIBLIOGRAPHY ENTRY IN ANOTHER NOTE USING THE OBSIDIAN APP

### Reference

![[Books/Mindset#^9d749d|Mindset]]

Dweck, Carol. /Mindset: How You Can Fulfil Your Potential/, 2012.



ADD AN EXCLAMATION MARK IN FRONT OF THE LINK TO EMBED THE BOOK'S BIBLIOGRAPHY REFERENCE



A REFERENCE SECTION AT THE BOTTOM OF ANY FLEETING NOTE

## REFERENCING

You can have a note that represents the book, article or video you're studying. Within this note, you can add a bibliography style reference using your preferred format.

Alternatively you can use an external reference manager like Zotero which will generate the bibliography text in the style you need. They have a library of styles which different educational institutions will have a preference for which one to use. Zotero has a browser extension to capture references as well as plugins to popular applications like Word and Obsidian.

If you store your references directly in your notes, you may be able to link to just the reference text and preview the contents.

Obsidian supports this with the use of ! to embed the contents of a link, and ^ to link directly to the line the reference is on. For example, if I create a link as `![[Books/Mindset#^9d749d|Mindset]]` then it will embed the contents (exclamation mark !) and a link to just the bibliography reference (caret symbol ^). This makes it look like it's seamlessly embedded into your literature and permanent notes.

## Citations

In some cases you might want to cite a specific passage within the source material. This would be carried out within your writing where you would cite the bibliography entry, include the quote, and include the page or timestamp.

For example, I may want to quote what someone says in a YouTube video within my work, and add a bibliography entry. Here's how I would do it from the video Common Logical Fallacies.

*According to Dr. Jason Lepojärvi (2021), "instead of addressing the argument, critiquing the argument, you attack the person making the argument" (7:44).*

## REFERENCING

Or shorten it to:

*"instead of addressing the argument, critiquing the argument, you attack the person making the argument" (Lepojärvi, 2021, 7:44).*

My bibliography entry would then reference the material:

*Lepojärvi, J. [Dr. Jason Lepojärvi]. (2021, January 13). 20 Most Common Logical Fallacies [Video]. YouTube. <https://www.youtube.com/watch?v=EYIIGsL4W4E>*

With a mixture of using tools like Zotero, or ChatGPT to help format the information you need, you can establish a system of recording your references and utilising them within your work.

# CHATGPT TO HELP FORMAT REFERENCES



If I give you the following:

URL: <https://www.youtube.com/watch?v=EYIIGsL4W4E>

Title: 20 Most Common Logical Fallacies

Presenter: Dr. Jason Lepojärvi

Published date: 13 Jan 2021

Quote: "instead of addressing the argument, critiquing the argument, you attack the person making the argument"

Timestamp: 7:44

Can you give me a citation and bibliography example using that quote?



Certainly! Here's an example of a citation and bibliography entry using the provided information:

In-text citation:

According to Dr. Jason Lepojärvi (2021), "instead of addressing the argument, critiquing the argument, you attack the person making the argument" (7:44).

Or

"instead of addressing the argument, critiquing the argument, you attack the person making the argument" (Lepojärvi, 2021, 7:44).

Bibliography entry:

Lepojärvi, J. [Dr. Jason Lepojärvi]. (2021, January 13). 20 Most Common Logical Fallacies [Video]. YouTube.

<https://www.youtube.com/watch?v=EYIIGsL4W4E>

## Creating original insights from your permanent notes

When we think of note-taking, we often think of it as a way to distill material into a condensed form that is easy for us to extract just the key points. Our notes are often a subset of the original material.

The Zettelkasten introduces the concept of taking these distilled notes stored as fleeting notes and recreate in our own understanding as literature notes. This is commonly referred to as note making—where you rewrite it in your own words.

But where the Zettelkasten really excels is when you make the jump from merely note taking, to insight making. I like to refer to this as gaining original insights.

This is what makes *you* the expert in what you think about. It's what helps you spot what nobody else has seen. It's what helps you create originality in areas that wouldn't be obvious to other people.

You achieve this by dedicating time to exploring your permanent notes and thinking deeply about them and their relationship to other notes. You're not looking to study any particular material, but think about the material you've already studied in new ways.

As an example, assume I'm looking at a note titled "Motioning triggered by our brain". This is about the dopamine hit we get when we merely have intent to carry out an action, but without actually carrying it out.

I can now explore where this could relate to something else in my Zettelkasten. Often I would have a gut feeling about the type of things it can connect to. This is a good place to start.

I might come across a note titled "Why we ignore facts when it disagrees with our opinion". This note explores the phenomenon that people who have strong beliefs in a given area will actively dismiss new facts that could challenge their internal belief system.

At first glance, the two notes don't particularly have anything in common. But this is where I can explore the relationship between them. I can think about one note in the context of another.

In this case, I will think of someone who is debating with someone else where they don't agree. One person is trying to change the mind of another by using facts, and the other is dismissing these and counter-arguing (potentially using logical fallacies).

Now let's explore what it means to have a dopamine hit here. What would make someone feel good? Part of it may come from the desire to share their belief system and convince others of their way of thinking. They may feel good when they've 'helped' someone else understand things the way *they* understand it.

So I could explore the insight that by using logical fallacies and 'winning' an argument, it could be a form of motioning. It makes you feel good that you have 'won' the debate. And since motioning is about intent, and not results, it applies here because they haven't helped anyone actually learn, but yet they feel like they have educated them.

Through the use of taking two existing notes and comparing the similar patterns and the relationships, I can identify new ideas that could be interesting to explore further and help me understand the topic at a deeper level.

While this isn't a scientific approach to create new meaningful insights, it paves the way to explore new ideas about the motivations of why people debate but seemingly get nowhere. Is it a feeling that they are providing a service to society, but in actual fact are doing more harm than good?

Watch any political debate and you're not left with the feeling that people are solving problems. They are only trying to convince the other side to admit they are wrong, or show them up to win the popularity contest. Does that make progress, or is it a form of political motioning—all intent and no action?

You can see how ideas can be forced together to find what clicks into place. There are endless opportunities to create original insights by exploring the relationships between your ideas.

Some will be good, some will be awful. You will need to trust your intuition about the core values you want to express in your ideas. For me, I want to explore how to create better discourse between opposing sides so the majority benefit from collaboration. This is part of my larger 'why' to inspire a generation of thinkers and doers. To support those who can bring common sense to the table and keep things on track.

What may come out of your insights are more questions. This is a great way for you to deepen your understanding. In my case above, I would start to ask the following questions:

- What motivates people to debate?
- How do external people perceive a public debate?
- What is preventing people from agreeing?
- Are they both right, but just have different priorities?
- Do debates alienate others so much that they feel ostracised and refuse to consider other points of view?
- How does someone judge their own performance in a debate?
- What self awareness is needed to have a constructive debate?
- What is going on in the brain during a debate?
- What hormones are generated during a debate?

As I continue to select the material that I want to study, I have a set of focused questions about what is relevant to my interests and goals. I'm scanning for information that will signal if it will help me answer these questions or not. By having insights captured in my Zettelkasten

and the open questions I have, this scanning process becomes a lot easier.

## Organising the chaos

The idea of putting all your notes in a single slip box can be quite daunting. As humans we like to categorise things so that we can keep them neatly organised. We like to name things, as demonstrated by nouns making up a significant portion of any language.

The problem with everything being placed in a single dumping ground is that you can't find what you need when you need it. You also don't know if you're adding something that has already been mentioned. This can lead to multiple versions of the same idea and your slip box becomes a *'write only'* place where you don't look back at previous notes.

We need a method to organise the chaos. Here are a few approaches that can help.

1. **Having a consistent naming convention**—This is helpful so you know what the pattern is to locate existing notes.
2. **Use index notes**—Notes such as a Map of Content can be useful to outline which notes relate to which themes.
3. **Use tags**—Tags can provide auxiliary information that can be useful for locating notes around a given theme. Although tags can be less useful than having an organised set of index notes, you either have lots of notes unorganised within a tag, or you create too many tags to choose from—just like having rigid folders.

If carried out successfully, your slip box should be able to handle tens of thousands of notes.

## Thinking like a database

A useful technique is to think of your slip box like a database of notes, not a folder storing a finite collection of notes. A database allows you to query its contents via a number of different methods. You can query by date, by relationships, by title, etc.

You can create index notes that list specific permanent notes based on a given query. For example, you could have an index note showing all the notes you have around Psychology. Or you might have an index note for all the notes with a hashtag status of #status/draft.

The flexibility you have can be down to the note-taking software you use. Software like Obsidian gives you the ability to use third party plugins like the Dataview plugin. This allows you to embed a table block within a note and list all the matching notes based on a query. This is a great way to think of your notes as a database and it automatically updates when you add or modify any of the notes in your slip box.

## Storing your index notes

You want to make your index notes easy to find within your slip box. This can be achieved by storing them in a separate folder or by tagging them with a hashtag as index notes. You can also create an index note that lists all the other index notes if you want to collate them into one entry point to your Zettelkasten.

One such example of this would be introducing a topic such as Business, which contains sub-index notes like Finance, Leadership, Product Development and Marketing.

Each of those child index notes would then list the permanent notes directly, or could in turn be another index note. For example, Marketing might link to Inbound, Sales, Paid Advertising and Social Media. Any of these could be their own index notes.

## Should permanent notes always be added to an index note?

You could argue that every note should exist in at least one index note. This is so you have the full hierarchy of your note system accounted for. This might be useful, but I wouldn't stress if a note doesn't naturally fit any of your index notes. Just make sure that it is linked to other permanent notes so that it doesn't become lost.

## A shared Zettelkasten within a team

Up until now we've only considered the Zettelkasten in the context of being a personal system. This makes sense as you're writing atomic notes based on your understanding and how you want to see things.

However, there are many situations where a collective Zettelkasten can be beneficial. Wikipedia is a great place where many contributors are adding content and managing links to related content.

Within many teams there are a range of use cases that can be helpful to have a shared Zettelkasten. These include but are not limited to:

1. **Design thinking**—Research on design guidelines, company approach, and historical experimentations can be collaboratively shared amongst the team.
2. **Content research**—Collective research on deep topics where the information can be repurposed across many different projects. One such example could be an educational company collecting research and ideas on the latest research methods. This might be used in product design and writing blog posts.
3. **Company culture**—As organisations grow they start to pay attention to Human Resources (HR) and company culture. These could be stored as atomic notes where the 'employee handbook' is a publication from the knowledge system. Such a knowledge

system could include any legal requirements, concerns, management techniques and interview techniques.

- 4. Software development**—If you work in a software development environment, a shared Zettelkasten for coding standards can be valuable. It can include the philosophy for the software architecture, recipes on how to do specific things, and patterns for the team to follow.

No doubt there will be endless examples where teams need to collaborate with common thinking and produce some form of output that can be used internally or directly with customers.

At present, it is usually an individual who is responsible for managing their research and thinking. They work in isolation to produce a near finished document before they seek feedback from the team. When a new team member wants to contribute, they often start from zero.

Software companies have gotten really good at sharing source code with very large teams, so much so that new team members can contribute with relative ease. But there is no established pattern for knowledge sharing within teams.

## The challenges with a team Zettelkasten

Attempting to implement a Zettelkasten within a team will have a variety of challenges. Let's explore what they may be.

- **Agreement on tooling**—People like what they personally are familiar with. It can be hard to get adoption for new software within a team if the workflows are fundamentally different to what individuals are used to. You may need to get buy-in across the team, especially if the software requires a per user fee.
- **Consistent approach**—Rarely are we taught how to use the tools. Everyone has a slightly different way of thinking and method of organising things. A collaborative Zettelkasten will need some ground rules in order to help everyone work

effectively. You'll need to think about who the champion is for setting these rules as rarely will it happen without some coordination.

- **Conflicting opinions**—As you store notes in a collaborative Zettelkasten, different people on your team might have differing opinions on the topic. New processes might be needed on top of the Zettelkasten to allow for these to be resolved via some consensus.
- **Awareness of notes**—You tend to favour things that you are familiar with. The notes you write personally will have more significance than a note written by someone else. It can be hard to make use of it as you will need to resort to doing some level of research on the notes made by your team members.
- **Too wiki-like**—There is a real risk that there will be too much noise in the notes where too much is linked or is hard to find. If you've ever worked in a large organisation where information is stored on the Intranet or Wiki, then you will quickly realise that it's easy to lose information hidden in the depths.
- **Notes become outdated**—Similar to a knowledge portal or wiki within a company, it's easy to put effort in creating new notes while they are relevant, but little motivation is there to go back and revisit existing notes to update or remove them. This means they can easily become outdated which weakens the trust the team has with the system.
- **Authority to make changes**—When a note needs to be updated or removed, it can be hard to make a decision if someone else wrote the note. You may feel like you're treading on their toes and may fear the repercussions if you make a mistake.
- **Autonomy in your thinking**—You like to have autonomy in your thinking. Creating notes collaboratively might limit the freedom to express your ideas. You'll be too conscious about whether a colleague will agree or disagree, or find it difficult to

grasp. What you write in your private notes may be the seedling of a profound idea that you're too cautious to say in a group.

- **Risk of not being simple**—One goal of the Zettelkasten is to write simply so that it's easy to comprehend later. This is fine on an individual level as you know if you understand. However, what one person understands, another may not. It can become hard to have the discipline from every team member to write simply so that everyone can understand it.

As you can see, creating a collaborative Zettelkasten is an extremely problematic challenge. You need to have a trusting team, clear ownership, and courage to express your ideas out in the open for all to see.

But if you achieve it, it can mean that knowledge can be utilised in a very effective way. New ideas can be explored collectively and the volume of work that can be published can increase exponentially. Whoever cracks it could reap great rewards.

## The alternative to a shared Zettelkasten

If having a collaborative Zettelkasten is too daunting, then encouraging individual team members to manage their own can be the way to go. With effective coordination, each member represents and owns their contribution to collaborative projects.

For example, if you're writing a publication about the effects of sleep and learning, you may have one team member who has heavily researched sleep and another who has researched learning. They can collaborate and pull the insights together which can become the basis for a collaborative publication.

This may be a more effective way of utilising the Zettelkasten within a team. It will lose some fidelity by not being able to connect ideas across disciplines, but with clever workshops and collaboration, those ideas could be connected in a form of 'pair note-taking'.

As always, you need to consider the longevity of the system. What happens when a team member leaves, do they donate their notes or take it with them? How do you stop two people researching the same thing, or should you actively encourage it?

## The discipline of parallel workflows

A non-obvious benefit of the Zettelkasten is that you end up working on multiple ideas in parallel.

Let's say you want to write for your blog. A traditional way of approaching your workflow might look like this:

1. Ideate on the blog posts you wish to create
2. Maybe do some keyword research, but unlikely for a personal blog
3. Start with the blog title
4. Write your first draft
5. Add any graphics
6. Edit your draft
7. Publish

This is what we would refer to as a **top down approach**. You start at the top (the topic) and keep adding detail as you go down to the foundations (the ideas). You may find gaps in your knowledge, so you carry out new research.

What is key to this approach is that you're unlikely to start 10 blog posts simultaneously. It would be quite tiresome to do lots of work up front, and then publish them all at the end. So instead, you do them one by one. Ali Abdaal refers to this in his Part Time YouTuber

Academy (PTYA) course as “don’t do heavy lifts”. In other words, don’t go through a lot of pain one article at a time.

With the Zettelkasten, you adopt a **bottom up approach**. You start by researching and gathering information and ideas. You allow your interests to guide where this goes.

As time goes on, your Zettelkasten has many different ideas and insights forming. At any point, you can decide whether your ideas have gained enough clarity that you feel it’s ready for sharing on your blog.

In this way, your new workflow may look like the following:

1. Spend 30 minutes reading and making fleeting notes
2. Spend 30 minutes turning any completed fleeting notes into literature notes
3. Spend 30-60 minutes processing your completed literature notes into permanent notes
4. Spend 30 minutes exploring your permanent notes and making new connections. Ask questions or modify notes based on your latest thinking. Try to identify if any ideas you have are candidates for a publication.
5. Spend 20 minutes assembling your notes for any publication projects into the project outline
6. Spend 30-60 minutes using these notes to write your first draft
7. Spend 30 minutes editing existing drafts

Depending on how much time you have, you may only do one of these activities a day. And how long you spend on them can vary to your preferences.

It's important to understand that in a single week you might be creating fleeting notes about psychology, making literature notes on business, and writing a blog post about education. You're working on different things in parallel. Each topic is just at a different stage of the workflow.

This sounds like a lot, but it's really about breaking down the activities into separate workflows where they're not dependent on each other. They are simply multiple queues containing the backlog of things to process.

## **The health of your Zettelkasten**

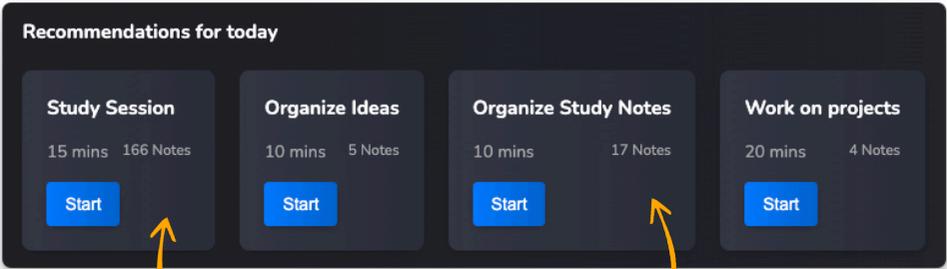
You have multiple queues to show the backlog of reading, fleeting notes to process, literature notes to process and the projects to work on. A healthy Zettelkasten removes the bottlenecks where one queue dries up or another gets too full.

One common situation is having lots of fleeting notes being created, but they end up sitting there waiting to be converted to literature notes. This then makes it impossible to consistently add to your permanent notes because there is a bottleneck further up the workflow.

## **Building a healthy Zettelkasten**

Visualising the health of your Zettelkasten is a tricky thing to do. It's such an abstract thought that no existing software really has a method of effectively helping you build the right habits in the right place.

This is what I want to change with Flowtelic, the note-taking app I'm building. I believe that a Zettelkasten should warn you if it's becoming unhealthy. The application promotes a focus mode where you can easily see what's in the backlog of each bucket and where the bottlenecks are. In this example, there are 166 study notes that need processing into the slip box.



WORKFLOWS BROKEN DOWN INTO THEIR OWN TIME-BOXED ACTIVITIES

THE HEALTH OF YOUR ZETTELKASTEN IS ILLUSTRATED BY THE NUMBER OF NOTES IN EACH WORKFLOW STATE

It is early days for Flowtelic, but I hope this gives you a flavour of the mindset that the software aims to achieve.



**PART 5**  
**STUDENT Q&A**

I have been fortunate to teach the Zettelkasten method on my YouTube channel, to PHD students, via my community pages and with one-to-one sessions. I get to observe some of the questions that come up.

The following section is an exploration into the different questions that I have been asked. I want it to give you a different perspective to think about how to resolve some of the challenges you may face creating your own Zettelkasten.

The answers I give may vary in approach to how I've explained it before. This is deliberate because I want you to understand the underlying ideas, not just the specific example.

## **Atomic notes**

### **What if my notes are too long?**

As you make notes, it's very easy to keep adding to them as you go, making them less atomic over time.

To start with, you might actually be writing your fleeting notes. These could be the dumping ground of highlights, ideas or questions you have as you read a book or complete any course material.

It's okay for these notes to be long. They act simply as a way to capture the filtered information from the original material into something more manageable.

However, as you process these into literature notes, you may find that making them atomic is still challenging. It's now important to consider the atomic nature of these literature notes if you want to exploit the full benefit of them in your Zettelkasten.

So when might you find your literature—and permanent notes—getting too long? Here's are some examples:

- **The notes explain a process**—Take the biology topic of DNA replication where to explain it you need to encapsulate each stage of the process. It may be hard to break this into atomic components without it losing meaning.
- **Concepts that are highly interdependent**—Sometimes the topic contains many higher interconnected concepts that it can be hard to untangle. It feels like that everything you mention requires a reference to something else. An example of this might be explaining how quantum computers work which relies heavily on foundational concepts and explanations.
- **Personal reflections**—When you are reflecting on your own thoughts and experiences. It can be hard to break these down as the material might be so intertwined with events or a conversation along with your subjective reflections.
- **Historical facts**—Listing out facts of a historical event can be quite difficult to break down as you would end up with lots of very isolated notes. An example could be explaining the events of the 1666 Great Fire of London.

In these situations it can be tempting to keep your notes dense with information. However an alternative approach would be to consider it as a sequence of continuation notes—where one builds on the knowledge gained from the previous.

For example, if you were to make notes on the steps of DNA replication, each atomic note might be only one step, but the notes are kept in a sequence. For example:

1. Replication Fork Formation
  - a. Enzymes called helicases unwind and separate the two strands of DNA
2. Primer Binding

- a. Another enzyme called Primase adds short RNA primers to the exposed single strands of DNA
- b. This provides a starting point for the replication process
3. Elongation
  - a. The DNA polymerase enzymes move along each strand of DNA
  - b. They add nucleotides to the growing new strand
  - c. A, T, C or G is added at each position along the new chain
4. Proofreading
  - a. As nucleotides are added, DNA polymerase enzymes check for errors and correct them if needed
5. Termination
  - a. The process continues until the polymerase reaches the end of the DNA molecule
  - b. It could encounter another obstacle such as a damaged section of DNA
6. Rejoining
  - a. Ligase enzymes seal any gaps in the new DNA strands completing the replication process

As you can see, we have a sequence of 6 notes explaining the complete process. By having these notes stored atomically, it now makes it easy to link to other notes that help elaborate on any parts of the process.

For example, a note explaining how the error correction process works could be linked to the Proofreading note. Another example would be ideas about what causes DNA damage, where it can link to the termination process of DNA replication.

By keeping these atomic, it means you break down your understanding into the smallest possible parts. They become highly linkable within your overall system. Also, by keeping them as a sequence, you maintain the overall structure as though they were one longer note.

## **Fleeting and literature notes**

### **Why bother with fleeting notes when reading a book?**

It's easy to assume that the meaning of a literature note is simply the notes made from a piece of literature such as a book. I feel that you must first capture the raw, but filtered information from the book as fleeting notes. You use this when creating your literature notes.

This method differs from others' teaching around the Zettelkasten. There's no specific right or wrong method. Feel free to adapt the approach so long as you understand what you're adapting and the consequences of it.

If you jump right to creating literature notes as you read a book, you may find that you later try to add it to your permanent notes too soon as you haven't fully understood the material.

You may have fleeting notes which could just be your own ideas from daily journaling. There's no source material such as a book that they come from. These too would be converted to literature notes where you express those ideas in a more complete and atomic way. It gives you space to really think about those ideas and make sure you understand them.

Another way to think about it is if you were to consider the role of fleeting notes and literature notes differently. You could consider a fleeting note like a 'capture note', and a literature note like an 'understanding note'.

Only when you understand the notes are you ready to merge them into your permanent notes.

## What's different about literature and permanent notes?

When you're new to creating your Zettelkasten, it can seem like your literature notes are no different to permanent notes. This is because you have no existing content within your slip box to merge them with.

The most important distinction is as follows:

- **Literature notes**—These are your atomic notes from one source material, such as a book. It's to ensure you understand what the author was trying to say. They don't need to be concerned with other books you've read, even if they contradict each other. Literature notes are locally scoped to the source material.
- **Permanent notes**—These are the atomic notes from all the material you have thought about. They contain ideas from all the books you've read. The ideas within them are connected to each other so your understanding makes sense holistically. You have an opportunity to resolve conflicts where two authors disagree on a topic. They are globally scoped to all the material you've studied.

## Can't I just write permanent notes?

This is a common feeling when you're creating a brand new Zettelkasten. Your first set of literature notes will most likely be placed with no modification into your slip box as permanent notes.

Because of this, it can be tempting to convert your fleeting notes directly into your slip box as permanent notes. It can be hard to justify the effort required to do the intermediary work to create literature notes.

As your Zettelkasten starts to grow, I would strongly urge against the temptation to work directly in your permanent notes. Here are my reasons why this would be problematic:

- **You can't batch your workflow**—As your thinking gets complex, it can become more time consuming to focus on creating your atomic notes while simultaneously considering what existing permanent notes you have. You want these as separate processes so you can minimise the cognitive load by only doing one type of work at a time. You're either understanding the source material, or you're considering the impact of the new material to your existing thinking. Don't do both at the same time.
- **Your thinking will be influenced by your previous ideas**—The main purpose of creating literature notes is to make sure you fully comprehend the material you're studying. If you're working directly in your slip box, you may be limiting the perspective of which to consider any new ideas. This can result in you suffering confirmation bias and not being open to new ideas that challenge your existing thinking.
- **It can be hard to think simply**—When learning anything new, you need to ensure that you fully understand it. This can be difficult for topics that are more abstract. The way to help you understand is to keep asking simple questions until you have the foundational knowledge to work from. This is easier to do within your literature notes because you're not distracted by the volume of notes in your slip box.
- **You may jump to conclusions**—If you have some knowledge of the subject in your slip box, you may be tempted to jump to conclusions and gloss over new information that could provide some interesting insights.
- **You may lose track of your thinking**—For larger study material, it can be quite time consuming to go through them all in the detail you need. You may spread your effort over days or

weeks. If you're adding your literature notes into your slip box as permanent notes as you go, you will find it hard to pick up from where you left off as they will now be merged in with your previous notes.

There are of course some benefits to working directly in your permanent notes. These may be to save time, or to use the existing permanent notes as foundational information so you don't have to repeat yourself.

Just be mindful of the consequences of your approach and do what works best for you.

## **How do I use daily notes with the Zettelkasten method?**

Daily notes are a great way for you to capture what's top of mind each day. It helps you reflect on the successes and failures. It helps you reason about areas you are struggling with and helps you take a step back and consider things more holistically. It can also help you plan your day and give you an opportunity to create focus for your day.

With a great template, you can use this as a prompt to unlock some hidden gems in your knowledge journey. Here are some examples:

- 1. What one thing you can do that will have the biggest impact?**—Think of the goals you want to achieve. Now look at what you are currently working on and see which ones are most likely to help you move towards those goals. It's easy to find yourself focusing on the wrong things.
- 2. What is making this hard?**—Now think about the work you're trying to accomplish. What is making it take longer than you expect? Try to find the blocking factors, such as lack of clarity, and see if you can think about it in a way that can unblock it.
- 3. What's the simplest thing to start these tasks?**—Look at what you have planned. What is the first action you can take that

will help you start gaining momentum on the task? Focus on the simplest things that can help you slip into flow.

4. **What distractions might you have?**—Now think about the things going on in your day that might distract you. Are you waiting for a phone call? Do you have a delivery? Can you prioritise shallow tasks around those times and keep your deep work activities protected.
5. **What were my recent gains?**—Celebrate what you did well. It's important to remember how far you're coming so you can feel positive about taking on new challenges for the day.
6. **If you did just one thing, which would make you feel like you've won the day?**—It's easy to overestimate what you can achieve in a single day. Trying to do too much and not achieving it all can be demoralising. Take this as an opportunity to celebrate doing just one thing for the day and let everything else be a bonus. Maybe start with that one thing so you bank success for the day.
7. **What ideas do you want to explore?**—Take a moment to capture any top of mind inspiration and ideas that you want to get out of your working mind and into your system. This frees your mind to focus on one task at a time.

These are just a few examples, but it can help illustrate where daily notes can be used as a tool to set you up for success.

What you have is essentially a daily fleeting note. Use it as a way to focus on what to work on with your Zettelkasten that keeps things moving.

Daily notes can help you build the habit of using your Zettelkasten in a consistent and effective way.

Should you convert these daily fleeting notes to literature notes? Maybe? Use it as an opportunity to review them and make any

literature notes where you want to store those ideas in your permanent notes.

## **What do I do about data tables and diagrams?**

Sometimes you find that what you're studying has some really interesting data that you want to capture as a reference in the future. It can be hard to approach this in your mindset of writing atomic notes because it's so densely packed with information.

In this case, it's perfectly fine to capture data tables and diagrams as a reference within your notes. You don't want to feel like you have to recreate everything in your own words for it to enter your Zettelkasten. This would simply be a reference, which you can link your own thoughts to.

For example, you might have some statistics on a topic where you have the results formatted in a table. Take a screenshot or copy the table contents in its own note. Then within your literature notes, reference it with your own thoughts around the data. Does it conclude with a specific point? Are there any issues with the data? How can it be used elsewhere in your thinking?

Another example could be where you're studying biology. Imagine you have a diagram explaining the inner workings of a human cell. You can copy the diagram and create your own notes around it to make sure you understand the diagram.

You might want to recreate parts of the diagram, but only do that if you feel you have a way to present the information better for your understanding. Maybe it's too complex and you can split it into simpler parts.

The only word of warning here is when you come to creating your own original work out of your Zettelkasten. You want to be able to use as many of your notes as possible without having to do any heavy lifting to recreate it. If you've copied a diagram from another source, you might not be able to use it for anything you publish due to copyright.

This is not an issue for studying, but can be problematic for any work you publish.

In this case, you might need to spend some time creating your own original diagrams that you can include in your published work.

## Adding to your permanent notes

### Do all literature notes become a permanent note?

When you create your atomic literature notes, you can visualise how it could be added to your slip box. After all, permanent notes are written in a very similar way where you write simply and link things together. So it might be tempting to try and make sure you put every single literature note in your slip box. Not doing so might feel like you're creating waste in your note-taking.

Consider your literature notes as your understanding of the source material in isolation. When you come to put them into your slip box as permanent notes you need to consider it in a different context—taking into account all the notes you have in your slip box.

Here are a few reasons you might not put a literature note in your permanent notes.

- **It doesn't add anything new**—You might find that you have already come to the same understanding previously and adding a duplicate note doesn't add anything new. An example of this might be a note explaining the purpose of DNA from a new text book, but you already covered that from a previous text book.
- **You might ultimately disagree with it**—It's okay to add notes that you disagree with, and add your reasoning. But every so often you will find content that once you scratch beneath the surface really has no substance. An example might be ideas that reinforce previously debunked theories, like an entrepreneurship author advocating for sleeping for four hours a night to hustle.

Your existing research might conclude why this is not a good idea. In this case you may choose to omit the note in your slip box, or add it with a reference and your reasoning for why you disagree.

- **You can't justify the claim**—Sometimes you come across a note that sounds like it makes sense, but as you consider it in the full context of your permanent notes, you realise it just doesn't hold up to scrutiny. One example may be your research on long term fasting and its effects on cancer reducing autophagy. You may find that you don't know what research the information is based on. So you may choose to omit it for the time being, or add it with a note indicating that this doesn't have references to justify the claim.
- **You don't understand it**—When you create your literature notes, you may find that it feels like it makes sense—enough for you to write your notes. But only on review do you start to notice that it doesn't actually make sense. This can be because the source material glosses over the mechanics of how a concept really works and you're not stuck trying to explain it in your Zettelkasten. If it's not a critical part of your interests, you may choose to omit it altogether. Otherwise you may choose to add it as a question to prompt for more research in the future.
- **It's too much of a tangent**—You may discover something that feels important in the moment, but on reflection would take you in a direction you simply have no interest in. In this case you may choose to ignore it if you feel confident that you won't want to explore it further, and if you did, you would probably do it from better sources anyway.

Be careful not to only add notes that you agree with. This can result in confirmation bias. You might find you only consider information that aligns with your belief and don't truly allow yourself to think critically about the subject. This can be all too tempting. So be mindful about the reason why you're choosing not to add the note as a permanent note.

## What if my permanent note is the same as my literature note?

There are two ways to think about your knowledge system. The first is a point in time snapshot of your current thinking. Old notes are removed, understanding is updated and ideas are adapted. This however makes it difficult to see how you came to this understanding because you lose the historical journey that got you there.

The second way to think about your knowledge system is like a version control system. You could theoretically go back in time and see what it looked like in the past. It's no longer a snapshot, but a historical record.

I mention this as you will now face the question of what happens to the literature notes as you transform them into permanent notes. Do you update the original literature note and call it a permanent note, or do you take a copy?

The answer is down to personal preference, but here are some benefits of keeping your literature notes separate to your permanent notes.

- **Full audit trail**—When you create your permanent notes, you can reference the literature note (or notes) that it was based on. Those literature notes in turn will have references to the original fleeting notes they were based on. And ideally the fleeting notes will reference the source material it was based on. This gives you a full audit trail of where your ideas originated.
- **Easier referencing**—With such an audit trail, when you mention an idea in a new piece of work (such as an article you plan to publish), you have access to the original material you can reference. If the ideas were based on a study, this trail should take you back to the exact study in question. If it was based on a quote from a book, then you should be able to locate the original text, author, book and publish date.

- **Easier to revisit the literature**—If you ever need to revisit the material your literature notes were made from, having access to the literature notes at the time you read the material helps you know what state your thinking was at. It helps you spot whether you misunderstood the material, especially if you find yourself re-reading the material or have been challenged to clarify your reasoning by someone else.

There are however drawbacks to duplicating your literature notes into permanent notes. This can be the effort required to do so and the repetition of notes with very similar content in your slip box.

Additionally, and depending on the software you use, you may find that your literature notes and permanent notes may have the same note titles. This can be confusing when searching for notes as both will appear in the search results. My recommendation is to archive literature notes when you have processed them. This still allows them to be linked to permanent notes, but doesn't let them appear as 'live' notes when performing searches. This can be tricky depending on the software you use.

Being able to see what your thinking was previously can be challenging for a lot of note-taking software. When you edit a note, it may not store the history of what it contained previously. This means the notes themselves only show your current thinking and not the journey that got you there.

How important is this for you? That really comes down to personal preference. You'll go a long way by updating notes and not worry about what they looked like in the past. Sometimes it's nice to visualise how your thinking is evolving, but this is probably just a vanity and does not improve the quality of your thinking.

## **Do I use one slip box for unrelated topics?**

There is a great benefit to keeping your notes in a single slip box. It means you can connect ideas together in novel ways that would otherwise have been missed.

One such example might be looking at information theory and biology. If you are looking at how evolution replicates DNA, but also how information evolves in society, you might want to draw a connection between the two. After all, DNA is a form of information, but its physical nature has limitations, such as mutations and multiple parents producing an offspring.

If you want to see what an example article of this concept would look like, then check out <https://meda.io/evolve-your-thinking/>.

By having these as separate slip boxes, it means you are unable to create connecting ideas between the two concepts. You might be tempted to say that you could link between slip boxes, but all you have really achieved there is some categorisation by topic and you might as well go back to storing your notes in folders again.

The true power of the Zettelkasten is to be able to connect disparate ideas together. As another example, imagine you are creating notes about The Golden Ratio. This is a mathematical ratio that keeps being found in nature and popularised in art due to it being aesthetically pleasing.

Now imagine you're making notes about social groups and the different relationships friends have within such groups.

With both types of notes being present in your slip box, you can start to ask questions that would otherwise be nonsensical. Such a question might be, "Is there a relationship between the depth of your friendship network and the golden ratio?". You may then create question notes which you can start to explore further.

For example:

"What are the structural properties of a social network?"

"Does clustering within social networks have a correlation to the golden ratio?"

"How to visualise the proximity and depth of a social graph?"

## ADDING TO YOUR PERMANENT NOTES

Okay, this is a contrived example and probably has no tangible meaning—notability because none of these topics are within my area of expertise. But what it highlights is that you can start to connect ideas together in such a way that new and interesting insights can now be possible.

As you work with your Zettelkasten, you'll have a 'feel' for the hunches you have about your ideas. That will guide what you decide to connect together and explore whether it reveals an insight—or simply leads to a dead end.

There are however some examples where you may choose to have multiple slip boxes. These are:

- **Where the fields simply don't overlap**—One good example might be a programming slip box and a non-programming slip box. Notes about how to write HTML and what foods help you sleep better might be a bit of a stretch to connect together. But if you feel there's a valid reason, then go have some fun mixing the ideas.
- **Where you don't own the content**—Having a personal slip box for your own thinking is great. However, if you want to apply this to your employment, it might be wise to separate the two. This is purely down to legal ownership of the work.
- **Where you're collaborating**—If you do work on a shared slip box with other people, then having it separate from your own personal one is a good idea. After all, you might not want someone else editing your carefully crafted notes.

Personally, I have my main second brain slip box which contains all my non-fiction learning, ideas and what I would consider my main body of research. Alongside that I have technical slip boxes, one for programming and another for learning Blender 3D.

## How do you name your notes?

As humans we love to name things. Pretty much everything we interact with has a name. However, the art of naming things can be very challenging—especially when it comes to our note-taking.

When thinking about naming your notes, you can choose any method really. But here are a couple of suggestions.

1. **Archivist**—Do you write your note titles as though they have been categorised? For example “Mindset in Enterprise” or “Cell Division”.
2. **Conversational**—Do you give your notes a more conversational name, like how you would mention it mid sentence? For example “Company’s approach to mindset” or “How cells divide”.

Of course, you can do what feels right for you. You might even want to mix the conventions you use.

Where it gets interesting is how you use these when linking from within the contents of a note. If I’m using conversational titles, I may wish to add the link in a sentence, for example:

“If you’re a business owner, you want to consider [[how companies approach mindset within a team]]”

If you want to use the archivist approach, then you might list the links later in the note, for example:

**See Also:**

1. [[Mindset in Enterprise]]

Depending on the software you use to make the links, you can rewrite the title of a link. For example:

“If you’re a business owner, you want to consider [[Mindset in Enterprise|how companies approach mindset within a team]]”

Within Obsidian you can use the pipe character to display the link more conversationally.

## What if two notes have the same name?

I know what you're thinking. If all your notes go in a single massive folder, you could potentially be adding thousands of notes into that folder. Then at some point, you discover that two notes have the same name but mean different things. An example of this could be the note "Obsidian". It could refer to both Obsidian, the glasslike rock, or Obsidian, the note-taking app.

But we have an even better example to reflect on. Wikipedia.

All web pages on Wikipedia sit under the base URL <https://en.wikipedia.org/wiki/>.

So, if I have the topic Mindset, this would be found under:

<https://en.wikipedia.org/wiki/Mindset>

But, the phrase Mindset could also mean the following:

1. The book *Mindset* by Carol Dweck
2. The 1984 computer called Mindset
3. The plug-in hybrid car called Mindset
4. The Mindset music album

The way that Wikipedia solves this is by having a page referring to the disambiguous meaning of Mindset which lists all the different types of Mindset.

[https://en.wikipedia.org/wiki/Mindset\\_\(disambiguation\)](https://en.wikipedia.org/wiki/Mindset_(disambiguation))

It then means that each variation will have the topic put into the name of the page.

1. [https://en.wikipedia.org/wiki/Mindset\\_\(book\)](https://en.wikipedia.org/wiki/Mindset_(book))

2. [https://en.wikipedia.org/wiki/Mindset\\_\(computer\)](https://en.wikipedia.org/wiki/Mindset_(computer))
3. [https://en.wikipedia.org/wiki/Mindset\\_\(vehicle\)](https://en.wikipedia.org/wiki/Mindset_(vehicle))
4. [https://en.wikipedia.org/wiki/Mindset\\_\(album\)](https://en.wikipedia.org/wiki/Mindset_(album))

Wikipedia solves this issue by putting the topic as a suffix within the filename of the web page and placing it in brackets.

We can apply the same approach to our note-taking and use a suffix notation to indicate the topic.

I know it's tempting to avoid this and place those notes within folders representing the topic. Doing so simply increases the cognitive load when trying to decide which folder a new note should be placed. It also doesn't solve the issue of a note belonging to multiple topics.

In conclusion, if you have two notes with the same name, then one or both need to be renamed to provide additional information to indicate which topic the note relates to.

Personally, I consider this to be more of a limitation of the software than a limitation of the Zettelkasten. Let me explain.

I like to think of all my notes like entries in a database. There could be one note, ten notes, or literally hundreds of thousands. It's the metadata that gives it context. This metadata could be related to the theme or topic.

I believe as long as note-taking uses a filesystem as its primary key (i.e. the filename), then these clashes will happen from time to time. It makes me wonder what a system would look like if your notes were simply a database of notes, but with the tools to easily visualise and prioritise the topic it refers to.

## Referencing

### How do you give credit to the original speaker or author?

As you read material such as books, you might want to cite a section from the book or credit the author as the source of your understanding. I like to do the following:

1. **Create the person note**—Add a note with the hashtag #person to indicate that it relates to an author. Briefly enter some memorable information about the person. For example, the person James Clear would have the contents “Author of [[Atomic Habits]]”
2. **Create the book note**—Add a note for the book, for example *Atomic Habits* with the contents “Written by [[James Clear]]”.
3. **Reference the book in my fleeting note**—I can now make a reference to the book in my fleeting notes. Ideally this will include a page number, or a timestamp.
4. **Reference the fleeting note in my literature note**—When I create literature notes from my fleeting notes, I can reference the specific line within my fleeting note that the atomic ideas are based on.
5. **Reference my literature note from my permanent note**—When creating my permanent notes, I like to reference back to the literature notes that they were inspired by.

So whether I'm using a quote or capturing the author's viewpoint, I should be able to follow the references all the way back to the book and author to know who said it, where they said it and what they said.

This is great when creating your own published work where you base it on your permanent notes. By following your references you'll be able to cite the origins of those ideas.

In some cases, you might just have your own inspiration when reading. There's no harm in creating an "Inspired by" reference back to the fleeting note.

With all this set up, you can then look at an author, book, fleeting note, or literature note and see the backlinks to know where that note has been referenced and used in subsequent work.

## Maps of Content

### How many Maps of Content should I create?

When you start to use Maps of Content within your Zettelkasten, you may find that they are mostly containing high level topics. For example, you might have one for Health, another for Economics and another for Business.

But there is no reason why you can't add additional perspectives on your notes through additional Maps of Content. It can then become a way to create unique slices of your notes based on what you find most interesting. This means a single note might appear in multiple Maps of Content.

Here are some examples where you might create different types of Maps of Content.

- 1. By Theme**—This is the most common. These can be the top level categories where you can outline the notes related to the theme inside.
- 2. By Idea**—You might have an idea you want to explore. For example "Ways to challenge your own belief". Here you can link to notes that you feel are relevant.
- 3. By Book**—You might want to organise your notes based on the contents of a book. This can be very useful for textbooks where

the contents start with foundational knowledge and then increases in complexity by building upon the information.

- 4. Glossary**—You might want to create a glossary which can be organised alphabetically. This could be useful if you're studying biology and want a glossary of Hormones within the human body.
- 5. By Questions**—You might have open ended questions that you are seeking to answer. You can create a questions Map of Content which helps by linking to notes that might contribute to finding an answer.

These are just some ideas and I'm sure you can come up with other types of Maps of Content that you can add to your Zettelkasten.

## Managing your notes

### When do you update existing notes?

When we think of permanent notes, the name implies that they are forever and immutable. This suggests they are unchangeable and are set in stone.

This is not the case. They are referred to as being permanent because it's the final form which they will take to encapsulate your most current thinking on a given subject.

So we need to consider when you would need to update a permanent note to be something different. Here are some scenarios:

- 1. A new literature note enhances your understanding**—Here you would update the contents to contain your newer understanding. Sometimes it will be a better example or a better explanation. This is common for a newer Zettelkasten where you mention something, but later understand more about it. For example, you may have a note about the amygdala with the contents "The part of the brain that processes emotion". Later you

might study the amygdala directly and want to include information about its location within the brain.

2. **You misinterpreted something**—Sometimes you may find you get things wrong. Learning about a subject from different sources can help you understand it better. When reviewing your permanent notes you might find it wasn't correct.
3. **The permanent note contradicts your new literature notes**—You may find that what you wrote originally contradicts what you're now researching. One such example could be something like "There are health risks of the Keto diet with regards to high cholesterol". Another book might go into more detail suggesting that the science is inconclusive.

There will of course be other scenarios where you want to update your permanent notes. Make sure your references still make sense after making any changes.

Depending on the software, you might find that you can keep a revision history of your notes. While it's not obvious whether that would be useful, it does give some comfort knowing that you can peer back in time to recover any notes that you might have discarded but later found useful.

If your software doesn't do this, then there is no reason why you can't create an archive folder, and move a copy of it there. Then you're free to update the note while maintaining a historical copy.

## **What happens to fleeting and literature notes?**

Depending on how strictly you follow the Zettelkasten workflow, you may find yourself with a collection of fleeting and literature notes that you no longer need. Once they have been processed and you have created your permanent notes, what purpose do they serve?

I personally like to keep them and use them so I can reference them from my permanent notes all the way back to the original source material.

But at the same time, I don't want to clutter my Zettelkasten with notes that I don't need to use on a day-to-day basis.

This is where archiving can be a great option. Once they are done with, marking them as 'complete' or 'archived' in some way is a great way to remove them from view, but still access them when you want to look up your references.

You can do this in your software via different methods. One would be to physically move the notes into an Archive folder which has a similar layout of sub folders to hold your fleeting and literature notes.

Another option is to use some of the metadata capabilities of your note-taking software, such as using a hashtag like #status/complete. The software you use might even have an archive feature, but be mindful and make sure you can still link to them without having to move it out of the archive.

## **Wont my notes get too messy without folders?**

It can certainly feel that your slip box is getting very messy as you add more and more notes into a single folder. The challenge this creates is that it takes longer to scan the list of files to find the one you're looking for.

If you like categorising things, you'll be tempted to put them in sub folders by categories, but I would urge you to resist this temptation without really considering the long term effects. Finding notes across any number of folders or deciding where to create a new sub folder is a huge cognitive tax. You want to work fluidly with your note-taking.

One of the main problems with some software applications is the perspective that your notes are physical files in a folder. If that perception was changed, then things would get a bit easier.

This is why thinking of your collection of notes as entries in a database rather than a collection of files allows you to think of your notes as something you can query, not something you can manually look through.

By having such a system in place, it means you can put hundreds of thousands of notes in your slip box without having to increase the complexity of how you interact with them.

Then your Maps of Content, note metadata (tags, keywords, themes, etc), links to other notes and of course, full-text search are fantastic ways to recall the notes back out of your system. You can move from having to see them all in front of you to trusting you have a robust method of finding them by using the search functionality of your app.

It is also important to know how to find notes that you already have. This helps you avoid scenarios where you create duplicate notes of the same thing because you didn't remember that you had already written about the subject previously. This is especially true when you might phrase the name of the note slightly differently than you did before, but conceptually they are the same.

An example would be a note "How to change your mindset" duplicating the contents of "Adopting a growth mindset".

These are ideas which I'm thinking about with Flowtelic. How can your notes be a robust database of your atomic ideas where you can surface and find them easily and at the right moment? How can you ensure that ideas aren't lost and never seen again? I feel there is a lot of opportunity to discover better ways of working with a large collection of notes.

## **Who has time to turn fleeting notes into literature notes?**

Time. The one thing we can all spend, but never replenish. It's easy to fall into the trap of loving the idea of a full and healthy Zettelkasten,

but end up with an imbalance of too many fleeting notes and not enough literature notes.

You may also feel that the exercise of converting fleeting notes to literature notes—and then again into permanent notes—is too costly. When you embark on a knowledge journey there are literally endless avenues to explore, which would take many lifetimes to think deeply about them all.

Really it comes down to priority. Use your time wisely. Think about what topics you really care about, and which ones are just useful. Spend more time on the things you are truly passionate about.

But there are some workflow tips that can help you along the way.

- 1. Batch your workflow**—Don't try to do multiple things at the same time. So don't try to create literature notes and permanent notes, and original thinking, and reading at the same time. Think of each type of activity as individual buckets and your job is to keep them moving consistently across the buckets.
- 2. Time box**—With each distinct activity, implement small habits that allow you to chip away at each workflow bucket. For example, spend just 20 minutes converting fleeting to literature notes. Spend 30 minutes converting literature notes to permanent notes.
- 3. Look for imbalances**—If you find that you have too many fleeting notes and not enough literature notes, then switch your focus to spending more time processing your fleeting notes into literature notes. A healthy Zettelkasten is where each bucket of notes has a stable and flowing amount of activity.
- 4. Make it fun**—If you don't enjoy it, you won't do it. Keep it fun. Think of it as a rewarding experience. Appreciate the activity of moving notes through the system, not necessarily that you're creating amazing work at the end. It should become part of who you are, not just a thing you happen to do.

- 5. Trust the process**—Don't give up too soon. Trust it. Commit to doing it properly for a period of time before making judgement. Like any new habit, it will take time to see the results of your hard work.

## What do you do with notes that are no longer relevant?

As you create your collection of permanent notes, at some point you might think that a note is no longer relevant. Maybe this is because your viewpoint has significantly shifted, or it was in an area of work that you don't need to think about any more. This can happen if you work in a very niche industry, but shift industry and know you won't go back.

Here are some options for you to consider:

- 1. Archive the note**—As discussed previously, you can simply archive it. This means that it will be removed from view from your active notes.
- 2. Keep the note, but add a footnote**—You may decide to keep it, but add to the note why you feel it is no longer relevant. This keeps your thinking current and avoids you somehow feeling it necessary to recreate it again in the future.
- 3. Consider the backlinks**—The note might be linked from other notes in your slip box. Check if there are any backlinks and update those notes accordingly with your new thinking around the subject.

## What should I do with old versions of notes?

This is an interesting question that comes up from time to time. What should you do with old versions of notes as you update them? I personally like to think of the bigger question: What is the scenario where I would need to look back at an older version of a note?

This answer might vary for different people. If your notes are about things like public policy, then having a historical record of what changed and when it changed, might be more useful. But for most of us, I doubt this is the case.

That said, here are some options you can consider:

- 1. Move the older contents to a change log**—While your notes can be atomic, it doesn't prevent you from storing historical information about it in the footnotes. Here you can document what changed, when it changed and why.
- 2. Archive a copy of the note**—You can of course make a copy of the note and move the old version to an archive. You could adopt some type of version number for those copies so you can track them over time.
- 3. App level version history**—Your note-taking app might internally track changes to your note anyway, which means you could time travel back to a previous version.
- 4. Use version control**—Some people like to write their notes in text format like Markdown. This makes it excellent for storing your notes in a source control system like Git. While it is great for capturing the changes, it doesn't help you understand the changes you make as you write your notes.

If you find you are making updates to a note, just be mindful of any backlinks to the note and make sure they are still valid and relevant.

## When should I use hashtags?

Hashtags are a great way to add metadata to your notes when working in a plain text format such as Markdown. Lots of note-taking apps support hashtags.

Here are some use cases when you can use hashtags:

- **To track the status of a note**—This can be very useful if you want to track the status of your notes. For example, it could be: #status/pending or #status/complete. You can then search for all pending notes using your software by matching the associated tag. Adding the forward slash also allows all ‘status’ hashtags to be grouped together in the user interface of your app.
- **To capture the theme**—You can choose to use hashtags to signal that a note belongs to a specific theme. For example #mindset or #entrepreneurship. You can of course group these by a folder like #theme/mindset or #theme/entrepreneurship.
- **To capture actions**—Sometimes in my fleeting notes I like to add #action next to a specific part of the note. This signals that I want to come back to this and take action based on the idea in the note.
- **To track questions**—Adding a #question is also a great way to collate all your questions together and ensure they don’t get lost when buried within your notes.

Feel free to experiment with workflows using hashtags in your Zettelkasten. Don’t be afraid to try different methods and reflect on what’s working and what’s not.

Some software applications support first class properties for your notes which might make the need for hashtags redundant. Notion supports item properties and Obsidian supports front matter to store metadata. Hashtags are just a simple way to put metadata inside the body of a note.

## **How do you store questions in your Zettelkasten?**

Being able to ask questions to your Zettelkasten is one of the powerful benefits that it provides. Rather than having a collection of static notes, you have a living and breathing form of your thinking. This means you can be dynamic with it, and asking questions is a great way to explore different ways of thinking.

But how do you store these questions? What do they look like?

In order to answer this, we first need to clarify what we mean by ‘a question’. A question may come in any of the following forms:

- 1. Fact-based questions**—For example, you might ask “what is the average temperature of the human body?”. These types of questions are usually measurable and can be answered concretely.
- 2. Conceptual questions**—You might want to ask questions about fundamental concepts or principles. For example, “How does mindset relate to mental health?”.
- 3. Clarification questions**—This is where you want to strengthen your understanding, for example: “What’s a good example of a fixed mindset in a team?”
- 4. Cause and effect questions**—This is where you try to understand how things affect each other. For example: “What causes a person to go from a growth mindset to a fixed mindset?”
- 5. Comparative questions**—These questions involve comparing different ideas together to gain a deeper understanding. For example, “How does having a growth mindset compare with someone who has grit?”
- 6. Application questions**—These questions try to identify ways to apply the knowledge learned to real world situations. For example: “How can a growth mindset be used to support your future leaders within a team?”
- 7. Evaluation questions**—These questions help you critically analyse and evaluate the information. They may ask “What are the strengths and weaknesses?” or “How do we know this to be true?”
- 8. Synthesis questions**—These questions help you think about the information or concepts more broadly to aid your

comprehension. For example: “How can a growth mindset be used in education?”

Depending on the questions, it might create one of the following actions:

- 1. To reason about your notes**—A question might be answerable by working through your own understanding and ensuring that your ideas are clear and concise. For example, it might be to clarify what you mean with an example.
- 2. To search for factual answers**—A question might require you to look up a fact or do more research in an area. For example, “How does the human cell work?”.
- 3. To scan for new insights**—A question might not be easy to answer. It might be quite conceptual, but you want to bring it to the front of your mind when looking for new material to research.
- 4. To ask better questions**—Some questions are just so abstract that they can’t really be answered. However, they may provide a good starting point to ask better questions which can be measured and tested. For example, “How can a growth mindset be used in education?” could be broken down into many sub questions, such as “What do educational institutes do to teach a growth mindset?”.

For questions that can be answered, store the answer with the question in your permanent notes.

For the questions that you don’t have an answer for, you can store these either within the notes they relate to, add a hashtag with something like #question so you can easily find them again.

Another option is to append your questions to your Map of Content for the topic. These are the high level questions you want to keep evaluating if you have found any information that can help answer them.

If you prefer, you can create a questions folder alongside your permanent notes folder, which simply holds the open questions as individual notes. As you create new permanent notes in the future, you can evaluate whether you have discovered the answer to the question.

A good technique is to ask yourself ‘How will I find out the answer to this question?’. This might prompt for the books or articles that you need to add to your reading queue.

There is no right or wrong technique, but I hope that you have an understanding that keeping track of your questions in your Zettelkasten is a great way to help you scan for anything that can be useful to answer them.

## **Numbering and hierarchy**

### **How do you number your notes?**

Generally speaking there is little need to number your notes within a digital Zettelkasten. That said, you might want to sequence your notes in order so that they make sense when one note continues on the knowledge of a previous. A good example would be notes about mathematics, where more advanced calculations may be based on previous formulas.

You can use a Map of Content to sequence these atomic notes. The notes themselves don’t need any special number or title as their presence in the Map of Content articulates the sequence.

A second approach to sequence your notes is to link to the next and previous note in each of the notes. This is what we would refer to as a linked list, where each note links to the next one in the chain.

Or you can sequence them together numerically so they can be sorted in a list based on their number.

Other methods often used within a Zettelkasten is a timestamp unique identifier in the format of YYYYMMDDHHMM where:

YYYY = the current year, for example 2023

MM = the current month, for example 12 for December

DD = the current date, for example 31 for the 31st of the month

HH = the current hour, for example 23 for 11pm

MM = the current minute, for example 15 for a quarter past the hour

An example may be 202307101110, representing ten past 11 am on the 10th of July, 2023.

This is extremely useful as it ensures the numbers are always unique within an accuracy of a minute. It also indicates when exactly the note was created which means they can easily be sorted chronologically. This is great if you're daily journaling and want an entry per day.

But they don't describe the sequence of the note within the context of other notes. This is where you might want to consider something like the Folgezettel system, as mentioned earlier.

The question you need to ask when it comes to numbering your notes is what problem does it solve. If it's a way to reference a note without having to use the title (meaning if you change the title but not the link), then something like a Universally Unique Identifier (UUID) might be better. Most applications that store notes in a database rather than a filesystem will usually have some type of ID they use internally. However, they may not let you utilise these IDs for your notes directly as they are generally not very user friendly.

## **Is note hierarchy discouraged?**

When we think about hierarchy, it's important to consider what type of hierarchy we are referring to. Traditionally this would be something like a folder structure with files contained inside for the notes. A folder can contain any number of sub folders and files.

The main thing to consider is that a single file—a note in our case—can only have one parent.

By trying to enforce a hierarchy, it means that you have to decide which parent a given note belongs to. The more sub folders you introduce, the more challenging it becomes to classify where a note should go.

Then you might have an idea note that connects two concepts together. You are now stuck as you might feel it equally belongs to two folders.

Having folders also creates cognitive friction when adding notes. You have to stop and carefully consider which folder it belongs to. It can get tiresome.

It reminds me of the early days using Microsoft Outlook for email. I would try to create folders to capture every type of email I would receive. When it comes to filing those emails, it would be such a mental effort to try and find the most logical place. Often, I would end up with folders containing just one email because it just didn't fit any of the other folders. Then your system feels odd having some folders with lots of emails and some with just one.

Trying to do the same in your Zettelkasten is no different.

But does that mean you have no hierarchy at all? Not exactly. After all, what does hierarchy really mean?

Your note hierarchy is a way to go from a broad, zoomed out perspective of your notes, all the way down to the highly detailed and refined notes. This can be achieved through the use of your Maps of Content by having nested lists of notes that it can link to. This means you can easily find your high level concept notes, and then see the child detail notes.

Another thing to consider is whether you would use hierarchy to organise your notes into the relative topics. Traditionally you might opt for folders for topics like Health, Exercise, Business and

Education. But instead you can choose to classify your notes using some form of metadata like a hashtag. This could be #topic/health, #topic/exercise, #topic/business and #topic/education.

If a note now belongs to multiple topics, then there is no issue of tagging it multiple times for different topics.

You can of course create a topic hierarchy if you desire, for example, #topic/education/teaching. But just be mindful that you could run into the problem of creating a lot of cognitive load trying to classify your notes. Remember, if you can't do it consistently across your whole Zettelkasten, you'll lose faith in its reliability. It is better to have something simple that you can trust, than something complex that you can't trust.

## Linking

### How do you create bi-directional links between notes?

We mention a lot about linking notes together. It's become very popular where a lot of note-taking apps allow you to use the double square bracket `[[` to signal that you want to link to another note. This is inspired from wiki style links and is an extension to markdown where a `[[link]]` is a shorthand notation to a local item.

Double square brackets are used because single square brackets usually refer to a web link out onto the Internet. Although most apps now automatically detect web links and make them clickable.

The way you make links is either inline in your text, or put a section at the bottom which contains a list of related notes. I like to use a "See also" section for related notes and "References" section for links back to the source material.

Now, you might see the term bi-directional links and wonder what this really means. It's very simple. It's a way for your note-taking app

## LINKING

to search for all other notes that link to the note you're looking at. It's a form of reverse search on the link. Bi-directional means the application can show you outbound and inbound links between your notes.

This is useful because if you're making modifications to a note, you can see what other notes link to it and consider if they need to be updated as well.

## How do you find the right notes to link to?

When you're new to the Zettelkasten you may be wondering when you should be making links. Are you making too many, or too few?

The main thing to consider when deciding what to link to is whether in the future—say six months time—there are any notes that would be good to look at next. Imagine what that would be like where you've forgotten the detail and you're discovering the content again with fresh eyes. What are the important related notes that would be good to discover again.

Usually notes that contain definitions might not be that useful to link to every time you use the term. For example, if I keep talking about growth mindset, linking to my definition note called "Growth Mindset" wouldn't be that useful.

But if I've written a note that touches on some of the understanding of other notes, then that is a great time to put the link in. One example would be a note talking about "making profit as a freelancer" where it would be good to link to "how to budget your finances". One note builds on the foundational ideas of the other.

Try not to link every keyword you have in your note to some other note. This will get overkill and tiresome to manage. Focus on the links that help you discover old notes that have the potential to spark new ideas in the future.

Some apps may try to automatically link to other notes. As AI enters the note-taking space, it might try to do some of this for you. Just be careful. The more you rely on the system automatically doing your thinking for you—you stop thinking. When you stop thinking, you stop thinking deeply about the subject. This limits your ability to make insights from your knowledge.

When you make links, you want to make sure you're able to find notes that are the right ones to link to. Use the search functionality within the app to find related notes that might fit what you want to connect to. This is where having a clear naming convention for your notes is very helpful. The note name should explain exactly what the note is about. This will then give you confidence that the link is correct and useful.

## **How do you connect ideas from different topics together?**

Being able to connect ideas together from different topics is a fantastic way to create original thinking. But how do you do it?

Earlier in the book we introduce the concept of intermediary note ideas. This is where you create an idea note that sits between two related notes. This is fine if you come up with those connections while reading. But what if you want to discover a connection that you haven't thought of?

This is where you can carry out creative exercises that help open up your mind to spot the connections that were previously hidden. The goal is to let your mind wander and explore the connections that are of interest.

I find that going for a walk is a brilliant way to help my mind take creative jumps. Often I will solve a difficult problem when I go for a walk. Maybe it's the increased oxygen to the brain and the change of scenery that helps trigger different neural pathways resulting in divergent thinking.

Other somewhat mindless activities can also help, such as doing the dishes or gardening.

It can help to prime your mind with something you've been working on. So review some of your most recent notes, think about them, then change your activity to let your mind wander. This is where you naturally think about unrelated concepts and see if they fit together like a puzzle.

I have most of my creative ideas when walking. Here are a couple of scenarios where I've experienced this creative inspiration:

1. While I was walking along the street, I observed that most cars look the same, but yet they are from completely different companies. I wondered how that was possible. Then I reasoned that the information that makes a car (engine, wheels, seats, general shape) are related, like ancestors in a species. That's when I let my mind connect the concepts of information and knowledge being like DNA and evolution, where mutations and two-parent offsprings of ideas can happen. You can read the blog post this inspired here:  
<https://meda.io/evolve-your-thinking/>
2. I was listening to an audiobook (possibly Principles by Ray Dalio) and the quote "If you want to know what God thinks of money, just look at who he gives it to" was mentioned. This immediately sparked an idea that I had been loosely thinking about. It's the idea that the less you care about the outcome, the more likely you will create the outcome. So to have money, you need to focus on enjoying doing something of value. To lose weight, you need to focus on small habits, not food directly. To be successful, you need to focus on enjoying gaining the mastery of your skills, not aiming to be smart. It sparked a paradoxical observation that the universe seems to have hidden under the surface. I'm yet to fully explore this idea, but I wanted to highlight how such ideas originate.

Another thing to explore is going through your permanent notes from time to time. See what jumps out, particularly as you read more material. You will start to see your older notes in very different ways with your new knowledge.

And most importantly, have fun with this process. It can be exciting to play with the atomic pieces of your ideas and see what can emerge from them.

## Studying

### Can you use it as a student in a classroom?

The use of the Zettelkasten note-taking method is gaining popularity within universities. In particular, PHD students are using it to perform deep research and as a tool for creating their own publications. I was fortunate to be invited to Queen Mary University of London to present a seminar on how to use the Zettelkasten method.

But can you use it in the classroom itself? Is it practical? I say yes. When in a classroom, you're really in the capture phase of your note-taking. You're listening to gain information you didn't previously have, and hopefully be able to make sense of it in the moment.

The problem with just listening though is that it suffers from:

- 1. The recency effect**—This is where the most recent things you have read or heard are weighted with more significance. So the older lectures will feel less relevant than the more recent ones.
- 2. Recognition, but not recall**—When we learn something and it makes sense, we feel that it's knowledge that we now have access to. However, this fades and you can't recall the information. This can happen with books. So you re-read it to remember, and you recognise what it says as though it's not saying anything new.

Being able to recall the information, whether from memory or using a note-taking system is extremely valuable.

So how do you do it? I personally like to use the outline method to create my fleeting notes in bullet point form when a lecture is going on. If there are diagrams that are relevant, then I might insert a photo if possible. This is much easier if it's online as you can screenshot as you go. Otherwise taking a photo is a possible second option.

What I'm really doing is filtering the most important information. I may decide to make quick fleeting comments such as whether it's a particularly important point, or if I need to explore it in more detail later.

The more you do this, the easier it gets. It can be quite daunting at first, especially if you can't type or write quickly.

This may feel like you're just copying the content from the slides which you could easily have access to after the class. While this is true, performing the act of writing can help with:

- 1. Saves time**—You only have a certain amount of time to work on this. If you can capture your fleeting notes during the lecture, it means you can focus on creating literature notes later, not fleeting notes.
- 2. Filter the information**—You are able to reduce the information from the lecture to its core ideas. When you create your literature notes later, it's much easier to work with less information than more.
- 3. It keeps it fresh in your mind**—The act of writing things down helps you build more associations with the content that would be otherwise more challenging. Another aspect is that by making notes, you're less likely to let your mind wander or feel sleepy—especially if the classroom is too stuffy.

What's important to note here is that you simply can't skip doing the work. There's no magical note-taking method that you can do in the

classroom that can avoid having to process it later. If you can capture your fleeting notes during the class, then you can focus on your literature notes at a slower pace and think more deeply about the subject.

Your literature notes are where you can truly test your understanding of the material. If you can't explain it clearly at this stage, you don't know it well enough. Any questions that you come up with signals for you to go back to your teachers and peers for help to clarify your understanding.

Finally, you convert these literature notes into your permanent notes. What you end up with is the atomic ideas structured in a network of connections. If you need to write an assignment, you can outline it with the notes that are relevant. If you need to study for a test, then these notes act as revision cards using techniques like spaced repetition.

Over time you'll get better at being concise with your notes. You'll copy less of the original material into your fleeting notes and be much better at spotting which points are likely to be useful and which are superfluous adding no additional information.

## **Is it useful for visual learners?**

When we think of the Zettelkasten, we often think of it through the lens of reading and writing.

So what if you're a visual learner? There is no reason why your notes can't be visually presented. As long as those visuals represent the ideas atomically and can be linked to other notes to build upon the knowledge, then it's a fantastic tool.

If you're a great doodler, then this is a massive advantage to brighten up your notes. You can create memorable diagrams and take your understanding to a new visual dimension.

Technology such as a tablet with a pen can be wonderful for your note-taking as it's easy to annotate your notes with diagrams, colours and icons.

One thing you can do is to standardise the type of icons you use. For example, a question could have a question mark icon, an idea could have a lightbulb and a definition could have a book icon.

## **What if I want to capture a quote?**

If you see a quote that you really like, go ahead and capture it. Some quotes you'll come across will be famous quotes, like...

*"I have only made this letter longer because I have not had the time to make it shorter."—Blaise Pascal, mathematician and physicist.*

Other quotes might be direct passages from a book you're reading.

What I like to do is capture these within my fleeting notes, but also reference who said it and where I saw it. I like to put them in double quotes so I know it was a quotable piece of content that I won't need to rewrite in my literature notes.

Then you come to write up your literature notes. Where do you store your quotes? We've really only spoken about rewriting the information into your own words. But a quote doesn't need rewriting.

This is where I would recommend creating a literature note specifically for the quote itself. You can then link back to the originator of the quote by creating a 'Person' note—which is great to see all the quotes by a given person. Finally add a reference to your fleeting note so you know where you discovered it.

A quote on its own might not be as useful as you like. It might have been the inspiration for some idea. You can either add your idea to the quote itself, or create another note to contain the idea.

Finally add some metadata to indicate that it is a quote. This could be a #quote hashtag or adding something like a suffix of “(quote)” in the note title.

Let’s look at a quote literature note...

## **Longer Time, Shorter Letter (quote)**

#quote

“I have only made this letter longer because I have not had the time to make it shorter.”

—[[Blaise Pascal]]

We often perform our thinking through our writing which means we may be verbose and long winded in how we explain things. It takes time to reason about what we have said and remove the extraneous information.

This quote highlights that when we communicate, we don’t always have the time to write clearly and concisely.

### **## References**

1. [[Link to fleeting note]]

The related person note might look as follows:

## **Blaise Pascal**

#person

Blaise Pascal mathematician and physicist

Now I have a way to organise all the quotes that I have seen and what they mean. I can also look for any places I have referenced the quote or the originator of the quote by searching for any backlinks.

If you come across the same quote multiple times from different sources, then you can reference multiple fleeting notes so you know the quote is a popular one. This is great for keeping track of which books are referring to the same quote and how they are interpreting it.

## **Writing in my own words, isn't that a permanent note?**

As you start a new Zettelkasten, the purpose of creating literature notes can feel really pointless. You put a lot of work into them making them atomic and written in your own words. You can link the atomic notes together so that you have a web of what you've just learned.

Then it comes to processing them as permanent notes. What's the difference? You're not exactly going to start rewriting it yet again, and if you did, you'd only end up saying the same thing.

What I hope that this book has achieved is explaining the subtle difference between a literature note and a permanent note. As a recap, literature notes are your understanding of the source material, and permanent notes are your understanding of the topic as a whole.

You might be tempted to skip the literature notes and work directly within your permanent notes. I'm not here to tell you not to do it, but I want you to be mindful of a few things.

If you try to understand the source material while comparing it to all your other notes, you might not get the full message that the author is telling you. You'll have a bias based on the notes you already have.

This is especially true if you're reading material that challenges your existing viewpoint. By trying to understand the information through

your existing ideas, you might exhibit cognitive dissonance where you'll have conflicting thoughts and will find it hard to reason about.

Another challenge is that your existing permanent notes might give you what's called '*motivated reasoning*'. This is where you're only looking for information that supports your preexisting beliefs.

By isolating the source material to their own literature notes, it gives you the breathing room to fully evaluate the material based on its own merits. You're not jumping to conclusions. You're just trying to make the most accurate sense of what the author had to say.

Only when you process your literature notes to your permanent notes do you resolve these conflicts. When you do, you'll be a little more open to finding a more truthful answer, and not one that you just happen to like.

At the end of the day, pick your battles. You don't have a lot of time to go deep on every subject. Use literature notes when you want to be an expert in the field. If you just want to get the job done quickly, keep the above in mind and do what works best for you. Just don't pick up any bad habits and fall into the trap of not thinking deeply about the subject.

## **Others say book notes are literature notes?**

You may have come across the Zettelkasten method from a variety of different teachers. There are plenty of YouTubers teaching their workflow—myself included. There are a few books on the topic and plenty of articles.

However, there's no standard approach and not all teachers of the Zettelkasten will agree with the various approaches. I have no doubt that some of my ideas might be controversial to other teachers.

I think it's important to understand that most teachers—myself included—had to learn the method from the fragments of information

## STUDYING

available. Some will have sought a more purist approach while others aim for simplicity.

I like to consider my work in this field to be in the middle. I want it to be directive so that you can use it without question, practical so you can unlock the value from it, and adaptable so that you can make it work for you. I like to think of my work as an innovators approach, rather than an academic one.

But one distinction I do want to draw attention to is what a literature note is. Some people may refer to it as the notes you make from external sources like books. This would then leave fleeting notes to be just your internal thoughts. This then means the next step is to take both these types of notes and convert them to permanent atomic notes.

I prefer to keep fleeting notes to be the raw capture of all internal thoughts and external sources. Then use literature notes as the understanding of the material in isolation.

The truth is, I don't actually remember how I came to this method of working. It would have been a mixture of reading Sönke Ahrens book *How to Take Smart Notes*, combined with many other articles and YouTube videos as I tried to assemble my own interpretation.

Did I get it right? I don't know. But I do believe that the components of the system are sound. First capture, then understand, followed by reasoning at the greater level.

I will always hold my hand up and say that my approach is a version of the Zettelkasten, or at least Zettelkasten inspired. As long as you know how to reason about the differences and understand what works best for you, I feel that is an acceptable outcome.

I would like to add that you might see terms like reformation notes and reflection notes. This is the approach Scott P. Scheper promotes in his *Antinet*. I like to think of these as forms of literature notes and idea notes. Reformulation as a way to form your understanding in

your own words and reflection as a way to think more deeply about the impact of that note.

Personally, I'm not even fond of the naming fleeting, literature and permanent notes. The phrases capture, study and permanent would be more fitting for how I use it.

I wanted to share this naked perspective on the differences between interpretations of the Zettelkasten. By understanding that there are differences, I hope that you can be more comfortable seeing how others approach it and can relate to the benefits and drawbacks of either approach.

Will there ever be one true Zettelkasten? I don't know. But I also know I'm open to evolving or adapting my proposed interpretation if I feel it is for your benefit.

## **How can I use this to study a big textbook?**

Some subjects will be faced with various textbooks to study from. They will contain explanations, descriptions, definitions, theories and examples.

What is challenging with a text book is that they are so dense with information that it can feel like you're recreating a whole textbook yourself. If you need to study all the material, then it might be unavoidable to create comprehensive notes.

However if you're reading with a goal in mind, you may be able to extract the information into your Zettelkasten as it becomes useful. This is all about prioritising your time so that you can focus on what's important.

What I would recommend when reading a textbook is to capture any 'ah-ha' moments where you suddenly 'get it'. Write in your own words what it was that helped you come to this understanding. This will help with your ability to recall it later on and be a note that becomes foundational to new ideas.

Another technique is to take a photo of any diagrams and insert these in your notes with a brief explanation of how to interpret it. If it takes a bit of thinking to understand the diagram, write down how you came to understand it so you can create a mental shortcut later on.

Using a Zettelkasten when studying from a textbook means you can create tests to see if you understand it. For example, assume you have a textbook on mathematics and its covering the topics of speed, distance and time. Now you can create notes that challenge your understanding using scenarios, such as how long it would take you to travel 300 miles when going 60 miles an hour.

Textbooks are usually structured in a way where they build upon the foundational knowledge from the earlier chapters. You can recreate this structure in a Map of Content. Over time, as you read other text books on the same field, you can consolidate the subject material. For example, if you're working on physics programming, your understanding of the core mathematics wouldn't need to be duplicated.

## **How do I deal with a 5 hour lecture in my notes?**

It can be hard having to deal with extremely long lectures and make meaningful notes from them. You want to focus on capturing the relevant information and use that as a way to construct your literature notes.

One technique you can use to speed things up is taking a screenshot of the slides and placing them into your fleeting notes for later processing.

The goal is to capture the right information and highlight the areas that you need to focus on. You want to distil the long lecture into its useful parts which you can then use to construct your atomic notes.

If the lecture is a video, consider showing the subtitles to help you with both hearing what was said, but also reading the content to speed up your comprehension. This can be particularly useful if the

person speaking has a strong accent or the audio quality isn't ideal. Just be mindful that if the subtitles are automatically generated, it might have too many errors in it.

## **Can the Zettelkasten be applied to technical books?**

As I started to explore the use of the Zettelkasten method, I found that it could be extremely applicable to recording technical information. This is handy if you're learning a programming language, or how to configure computer systems like cloud hosted environments.

A lot of this information comes through from reading documentation, watching online tutorials and reading articles and books.

If you're learning while trying to put it into practice, it can be easy to follow along but not record what you have done so that you can recreate it again later on. This is where capturing the process in your notes can be helpful.

Consider if the material you're reading is specific to a single piece of technology (like reading the online manual), or across multiple technologies, such as learning JavaScript, React and CSS at the same time.

The Zettelkasten is perfect for storing this type of information as it can span across multiple technologies while allowing them to be combined. I have used it quite heavily to build my own knowledge base for configuring DevOps systems. This includes notes about Kubernetes, Docker, Digital Ocean and topics such as Bash scripting. If you don't know what any of that means, don't worry, it's highly specific to DevOps.

The point here is that my technical Zettelkasten can be a collection of:

- 1. Definitions**—Introduce what the products are and the problem they solve. The use of backlinks can relate to every time I've used it to solve a problem.
- 2. Tutorials**—Record how I did something to set it up and configure it. This means I can retrace my steps if I need to go back to it again in the future.
- 3. Problem solving**—When I hit a problem that I need to figure out how to solve, I can record this along with the solution in my slip box so that I can revisit it should I hit the same problem again in the future. I think about naming any notes in a way that makes it easy for me to naturally find again in the future.
- 4. Patterns**—If I am using the technology in a specific way, then I can record it as a reusable pattern that I can adopt again in the future.
- 5. Do's and Don'ts**—If there is anything that I should explicitly do or explicitly avoid doing, then I record these in my slip box.

So how could you use the Zettelkasten to learn topics such as ReactJS and TypeScript. You might build up a Zettelkasten with the following notes:

- React
- TypeScript
- Installing React
- Installing Typescript
- Hello World In React
- Input forms in React
- Submitting data from React to a TypeScript server
- How to show a dialog in React
- How to save to the database using TypeScript and MongoDB

Here is an example of where I would store reusable patterns from my Flowtelic note-taking app. Every time I want to create a Button that can open up as a menu, I would look at the pattern, copy the code example and adjust it for the UI component I'm working on.

The note can also have internal links to related patterns that might be useful, for example, how to render a different component inside the button menu rather than as a menu item.

You can even store your notes with your codebase if you desire. This makes it easier to access when you're working with the code and can be shared amongst a team.

One of the great benefits of having a system like this is that you can use it to teach others. You can take any of these notes and effortlessly create a tutorial for someone else. This is perfect if you want to publish on a blog as part of your learning journey to demonstrate that you're highly competent. This is a brilliant method if you're applying for software development jobs and lack a portfolio.

You may of course be concerned that the information gets out of date quickly. This is fine. You can use `#deprecated` on the notes if you find that it is no longer relevant, but is still useful if you need to revisit it or update it to the latest version.

## **Can you use this method to study for certification exams?**

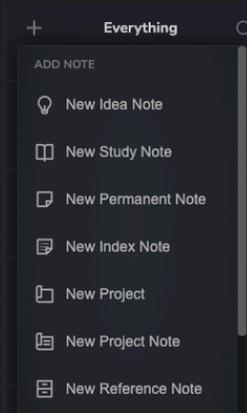
You may be studying with the intent of passing an exam. There are many techniques that can help with this to allow you to recall the information during exam conditions.

What worked extremely well for me during my exams (which was a number of decades ago now) was to use a mind map of the ideas. I would redraw the mind map on my exam sheet to recall all my key knowledge, then write the answer to the question.

# RECORD TECHNICAL PATTERNS

## Button Menu

A button menu is a component that shows a menu in place when a button is clicked.



CREATE SMALL ATOMIC NOTES THAT  
MAKE YOUR LIFE EASIER WHEN  
BUILDING SOFTWARE WITH REUSABLE  
CODE SNIPPETS

Render a menu item when you click a button

```
import { MenuItem } from "ui"
import { useMenuProvider } from "providers"

const Comp: React.FC = () => {
  const [showMenu, hideMenu] = useMenuProvider()

  function handleOpenNewTabClick() {
    hideMenu()
    console.log('open in new tab clicked')
  }

  function handleClick({ x, y }: { x: number; y: number }) {
    showMenu({
      x,
      y,
      contents: (
        <MenuItem onClick={handleOpenNewTabClick}>
          Open in new tab
        </MenuItem>
      )
    })
  }

  return <Button onClick={handleClick}>Click me</Button>
}
```

## See Also

1. [Rendering a component in a menu](#)

There are two parts to your learning. The first is to memorise, and the second is to understand. Memorising is what we focus on if we're cramming for an exam. In some cases, it's unavoidable to focus on just rote memorisation, particularly if the subject has specific terms and definitions.

But if you're studying to understand, then you need to think more deeply about the subject. This is where the Zettelkasten helps you achieve this.

You can use your Zettelkasten to create atomic notes that can be used for revising. One example would be to pose a question, and then have the answer contained within the note. If your note-taking software supports it, you can hide the answer in a toggle section so that you have a chance to answer it before revealing the correct answer.

There are other pieces of software which can take these notes and use them for spaced repetition. Software like Anki is designed for this purpose.

While the atomic notes in your Zettelkasten may be predominantly text, do not be shy of using diagrams or embedding mind maps to help you visually recall the information. In fact, you can embed anything you want really, so maybe include audio or video clips if that is helpful.

One of the best techniques when studying is to try to associate the information you want to remember with something else. This could be a change of environment, or some other piece of information that can act as a key to recalling the useful information. The idea here is that you just need to remember the environment and then this may trigger your memories of what was associated with it.

This happens to me all the time when I'm listening to audiobooks while travelling. I have specific locations that if I think about them, I can recall what was said within the audiobook.

The best type of learning is where you deeply understand the subject and you're not just recalling facts about the subject. This is the true

power of the Zettelkasten. Try to probe your understanding during your study session. Ask questions about what you know from different perspectives to see if your understanding holds up. Use writing as a great way to organise your thinking and recall the information when you need it. Useful during exams.

## **How far do you go down the rabbit hole of things to study?**

*If you wish to make an apple pie from scratch you must first invent the universe—Carl Sagan*

When doing any form of study, it can feel like there is an endless amount of threads to pull on in order to get to the root understanding. Much like when Carl Sagan refers to making an apple pie from scratch, your knowledge system can feel like going from an apple pie back to the fundamental laws of the universe.

It can be overwhelming and exhausting. Your curiosity is just too engaged and too many questions or curious tangents mean you get lost in the web of knowledge.

This is particularly challenging if you are someone who has ADHD tendencies, where your mind is racing to explore all avenues at once and find it hard to let them go.

An example of this would be studying an article about fasting and the health benefits. The article mentions that fasting can trigger autophagy, a process where the body removes its own tissue which helps cleanup defective cells. This then makes you want to understand how this process works, and before you know it, your exploration of fasting has led you to studying the inner workings of a cell. You fell down the rabbit hole.

I look at this and think that it's all about priority. Your priority should be aligned with the goals of your learning. If your goal is to understand fasting and the benefits, then you shouldn't be too

concerned with how the biological systems work within the body, but focus more on the habits, mindset and practice of fasting. But if your goal is to understand how to optimise how the body works, then taking a deeper look at the biology of the human body can be beneficial.

The second thing to consider is you do not need to do everything all at once. There is a skill to staying focused on one idea at a time. It's a skill that you can develop and strengthen. You do this by having a system of which to handle the tempting thoughts where you may get distracted. It helps to have a scratch pad to jot down the tangents, but deliberately not act on them in the moment. You can review these at a set time later on and evaluate them against your priorities.

## **Original thinking**

### **My notes aren't original, I'm just copying from a book**

You may find yourself reading a book and everything you read just seems novel and interesting, but you can't add any of your own ideas to capture. This is quite common if you're new to a field, or new to note-taking in general.

The challenge is to distinguish between the core ideas and definitions from the way the author has presented it. The good news is that the more you read, the better you become at capturing the core idea. So don't worry so much about it at first.

This is why I like using bullet point lists for my fleeting notes when reading a book or article. It helps me break away from their writing and just capture the core concepts. When I create my literature notes from these bullet points, it's easier for me to write it in my own words and with my own thinking.

Being able to write it in your own words plays a very important role in your note-taking. It helps you transition from recognition to recall.

## ORIGINAL THINKING

Recognition is where you know what was said, but you can't recall it. So you re-read the passage again and it just feels so familiar. By rewriting it in your own words, you strengthen your ability to recall it again later. This is because you have invested conscious effort to make your ability to recall the information stronger.

There is of course some information that you do need to capture as it was presented. These could be quotes, formulas, conversations or diagrams. As long as you know whether something was written originally by yourself, or copied verbatim, this should be fine.

The fear of copying the work into your notes is that you might accidentally publish someone else's work while thinking it was your own. This is why I propose that whenever you copy someone else's work verbatim, that you indicate in your notes that you have done so with a reference to where you copied it from.

## **How do I write notes in my own words?**

Trying to write about a topic that you're unfamiliar with can be quite difficult. You're trying to understand what it means, while also trying to express it in sentences.

An approach that I find very helpful is to just write bullet points. Fill out what piece of information is relevant to explain it in your own words later. This will test your understanding of the idea and whether you can express it concretely or have any gaps.

Later on in your literature notes you can expand these bullet points into your own words. The bullet points make it easy to have just the information you need to explain it. This allows you to focus on your writing ensuring the explanations are clear and concise.

If you get stuck and can't figure out how to say it, just imagine that you're explaining it to yourself six months ago. Have a conversation with your past self and use your own language to get the idea across. This can remove the pressure of saying something perfectly, and helps you focus on saying it simply.

Have a conversation in your writing and use your own language. Pose questions and see how you can answer them. Try to think about what confused you, or what you wish you knew, and write about that.

The most important thing to remember is that with practice you naturally get better. You start to have a method that you slip into where you can write with ease.

## **I've run out of notes to process**

You're happily creating your permanent notes and adding them to your slip box. Then suddenly, you have no literature notes left to work with.

Maybe you're trying to work on a project and you're using your permanent notes as the building blocks to work from, but there just aren't enough notes that cover the topics you feel you need to cover.

The answer is simple. Read more books. Or any other content that helps fill the pipeline of ideas coming into your slip box.

But if you do run out of notes to work with, use it as an opportunity to start asking questions. This helps you focus on what new material you should consider reading.

Personally, I like large abstract questions rather than narrow, fact based questions. Take the example of having notes about habits and mindset, I may look at it and say: "How might society benefit from a growth mindset taught in education?"

I doubt this is a question that I would be able to answer. But it gives me a lens of which to explore the following:

1. What does a growth mindset mean to a society?
2. How does a society function?
3. How does education play a role in the formation of society?

#### 4. How does education teach mindset today?

The list could be quite endless. But it signals that there are two key topics that I should start to explore. Society and Education. I can now look to books or articles that can give me an introductory view on the topics, and from there I can start to narrow my focus into specific areas.

My continued research doesn't have to be limited to reading. I could look to seek professionals in those fields and conduct interviews.

### **When can I connect ideas in my slip box?**

There is no hard and fast rule of when your slip box is ready for you to start connecting ideas. Naturally the more notes you have, the more opportunities you have to make connections.

But in some way, you can do it when you have your first batch of permanent notes in your slip box. Think of your own questions and ideas and add these as their own permanent notes, linking to any notes that are related. Do this by reading a few of the permanent notes and think more laterally about the subject. Ask questions like "how does it apply to...?" or "when is this not true?"

Another technique is to look at the keyword level within your notes. See what words or phrases jump out that could be inspiration for connecting an idea.

For example:

### **Short and long term memory**

When we are actively engaged in learning, we use our [[working memory]] to store information as we are processing the task. Once we have assimilated the information, it is committed to [[long term memory]] in the form of [[mental schemas]].

Here there are a few key phrases that jump out:

- Working memory
- Long term memory
- Mental schemas

As I review what each of these are, I can ask “What does it mean?” or “How does it work?”. These can be ideas for connections that I can write about.

I might want to create a note about working memory and try to explain it. Now I may have questions like: “how do you improve your working memory?”.

Quickly I will find that I won't be able to answer those questions. This prompts me to find new material to study to see if that provides an answer.

## **Am I plagiarising when I write my own articles?**

You're at the point when you want to write your own articles based on your notes. However, if your notes are from a single book, to write an article based on it might be too similar to the original author and not provide any new information. You may even feel like you're just copying someone else's work, just in your own words.

This is really only true if you've not read different opinions around the same subject. You don't have any countering points of view, or alternative approaches to understand the material.

The process of creating permanent notes from your literature notes is so that you can consider it against all the other notes you have. This means you're adding to the original work, not just copying it. You're adding your own connections, your own opinions, and your own insights. What you're doing is synthesising a new body of knowledge.

You may feel that you're merely standing on the shoulders of giants. But that's true of almost everything. You're utilising that to discover new ways of thinking, which is a valuable contribution.

## **Creating projects from your Zettelkasten**

### **When can I write blog posts from my Zettelkasten?**

I'm a strong believer that by writing and publishing your own work, it helps you clarify your thinking. It gives you the opportunity to invite others for feedback. That feedback helps you see the parts you missed or helps you sharpen your thinking.

Knowing when your Zettelkasten is in a good place to publish work (such as a blog post) can be challenging.

Ideally, one of the measures of whether you're ready is when you could create a full blog post purely from the notes that exist within your Zettelkasten, and without needing to do any additional research.

A lot of this might depend on the type of post you want to create. It could be introductory, a deep dive, or exploring a narrow perspective trying to express a unique point of view.

I would say that you would need to read a few different sources of information on a given subject to give you the ability to have a balanced understanding. This will help you to see the patterns and opinions between different sources. Resolving these differences as you create your permanent notes will help you form your own unique perspective and understanding. It's this understanding that you want to consider ready for publishing in your own work.

Another method to create blog content is to pose questions that you feel are unique and interesting to ask. Then use your Zettelkasten to see if you can answer the question. It will help you find the gaps in your notes which you can fill by carrying out new research.

This is a top down approach where your article is driving the knowledge. In an ideal world you would do a bottom up approach, where you look at the notes you have and decide if they are complete enough to make an article. But if your Zettelkasten is new, then a top down approach will be fine to get you going.

## **What if I have a project before my notes?**

You may know exactly what you want your project to be about. This project might be an article, a research paper, a YouTube video, or even to write a book. You know that the Zettelkasten is a great method for organising your thoughts and notes that can help you create this project. But you don't have the notes.

Here you are really aligning your goals of what you want to research in your note-taking. You know what you want it to be about, but you don't know the conclusion. You may have a feeling, but only the research will reveal the conclusion.

Be careful though. You might be looking to research only the material that supports what you want to project to say. This is where you cherry pick the research that only supports your ideas. This is not deep thinking.

An example might be wanting to create an ebook about the benefits of the 5am club to achieve success. You might feel that everyone can simply pick whether they are productive at 5am and overlook any information relating to their chronotype. I'm sure you can think of many other examples where a content creator would select information that only aligns with their belief and what they want to be true.

By having the conclusion in the form of a project first, it limits what you are prepared to explore. In some cases that exploration would eliminate the whole premise of the project.

The other disadvantage of trying to create a project before you have the notes is that you will keep hitting a stumbling block. This is where

you will need to switch from writing back to researching in order to progress. This context switching can be very draining and makes it difficult for you to get into flow when working on the project.

The real benefit of the Zettelkasten is where you identify projects that you can create from your Zettelkasten. It opens you up to explore any direction of research without the constraints of needing it to fit a predefined narrative. You are simply writing about what your notes already explain and not trying to invent a new conclusion.



**PART 6**  
**NOTE-TAKING AND AI**

As I write this, artificial intelligence (AI) has exploded on the scene and is shaking up the creative industry. Generative AI lets you create text, images, video and sounds by entering a simple prompt and letting the machine do the rest. Software developers are seeing where AI can analyse code, fix bugs and even create computer programs itself.

But where does this leave note-taking and knowledge management? In this chapter we'll explore how to think about the role AI will play in the coming years.

## The big question

At the moment, AI has the biggest threat to knowledge workers. If we humans use information to synthesise meaning and decisions from it, AI could potentially do this. It has the potential to do it faster, cheaper and without error.

So will knowledge workers be out of a job? It is not for me to say. What I will say is that AI will certainly be a tool for knowledge workers to be more efficient. Imagine how painters would have felt when photography was invented. Some would have adapted their artistic styles to what photography couldn't replicate, and others would have incorporated photography into their art.

The challenge with AI is that the pure speed, power and global access feels like it will happen all at once. The ripple effect of its impact will be unpredictable. Some jobs will go away, and many more will be created.

The other challenge with AI is that it is a race to the middle. Subpar creators who use AI to enhance their craft will improve. Above average creators will use AI to speed up their workflow and will settle for average. It's only those who are true experts in their field who will not adopt AI wholesale and will retain their expertise by avoiding the race to the middle. That is until the capabilities of AI surpass that of any expert in their field.

When it comes to knowledge management, we need to consider how AI will impact our ability to think deeply, find novel insights and publish our thinking for others to benefit.

The problem isn't really that AI can do any of this. After all, there are plenty of other humans who can do it all better than us. The problem with AI is the sheer volume that it can do in such a short period of time. This will be the equivalent of the population of the human race multiplying by 1000 all competing in your specialist field, but without 1000 times the number of people to enjoy it.

## **Thinking vs tools**

AI will essentially be a tool. Already it is being integrated into popular note-taking apps for various tasks. Mostly it is around generating content for your notes, but given time it will expand into other use cases such as project management and virtual research assistants.

But all software is simply a tool. Like Photoshop is a tool for the artist, note-taking software with or without AI is still a tool to get a job done. That job is to think deeply, create understanding and share it with others.

So carefully consider what it means for you. You're reading this book not just because you know you have to use a note-taking system, but because you want to use it. You enjoy learning. You enjoy the skills and craftsmanship that it brings. You enjoy the knowledge that you gain and how you can use it in your life and share with others.

Do not let any tool, AI or otherwise, take that away from you. If knowledge management was sold like playing a video game, then AI taking control would be like watching an AI play the game instead of you. It's not that fun.

## AI vs deep thinking

Generative AI can help you create written work simply by prompting it. It can help you explore concepts or clarify things in a simpler way should you not understand it. It can be a great teacher.

But should you let it do the thinking for you? After all, you could take someone else's notes and simply store it on your computer. It's reasonable to say that you haven't learned anything or understood it. Using AI to create these notes, reason about them, and perform the thinking is no different. You cannot outsource deep thinking to an AI.

So when can AI be useful? It can be useful if you're stuck and need to unblock the creative process. You can tell it what you understand right now and ask it questions. These might be to look for gaps in your understanding, or what you should explore next.

But you shouldn't use AI to remove the need to think. If you find you're merely using AI to give you all the answers and not really considering what those answers mean, then you have outsourced your thinking.

Remember that your brain is great at solving problems it has been exposed to. When you take a walk, you start to think more laterally about these problems. It will naturally try to compare them, reframe them, and analyse them. In order to get into this state, you need to actively think about the problem in such a way that your subconscious can process it. You cannot do this if the AI simply does the work for you.

## AI vs creative skills

There are many creative endeavours when it comes to knowledge management. It may be your ability to create beautiful notes, write, draw and paint, or create videos. Even the ability to tell stories, create reasonable arguments, and communicate clearly is an artistic skill.

Should you let AI do this for you? Really, it depends.

Take the preprinted messages you get in greeting cards. These were introduced to make the cards more accessible to people who either lacked the ability to come up with a heartfelt message, or lacked the ability to write. It made it more accessible for those who wanted to say something special in a card, but lacked the ability to do so.

AI can do the same. If you want to be a deep thinker and share that with the world, but your ability to write is constraining you, then AI will be a huge benefit. If your reading skills are not as strong and you want to condense the contents of large articles and books, then AI can be a huge benefit.

The reality is that AI should help you with your goals, not replace your goals. I have used AI generated images throughout this book. It is because I can quickly convey an abstract concept with vivid imagery to help communicate. My goal is not to give you amazing artwork, but it is to teach you the Zettelkasten note-taking method. It is a tool that serves a purpose.

While it is possible to hire an artist to do this job, it comes at a tradeoff that it requires money and would have taken a lot of time away from writing the book.

You will have your own priorities. If you want to be an excellent writer, then AI cannot do the work for you. If you want to be an excellent reader, then AI cannot do the work for you. If you want to be someone who can think deeply about a subject, then AI cannot do the work for you.

## **Where AI can be powerful**

It's impossible to predict where AI will take knowledge management in the coming years. As a software creator building a note-taking app, it's important to know the role of AI and not simply try to chase the latest shiny thing. I have seen many note-taking apps add generative AI which does feel a little bit like a box-ticking exercise than anything

truly remarkable. That said, there will be some really compelling use cases. Here is where I think it will be headed:

## **An AI assistant**

I can see where an AI assistant will be extremely helpful. This will be a bot that you can discuss your ideas with and have it talk back to you and challenge you to think in different ways.

This assistant will be able to remove some of the tiresome tasks such as finding and understanding research studies, fact checking what you read and write about, and help you find references to where the ideas in your notes originated from.

You'll be able to have this assistant recommend new relevant work that has been published for you to consider exploring next. It will be able to find real world examples of the ideas and concepts you're writing about so you can get a first hand perspective.

As you publish your work, this assistant will be able to format, illustrate, and generate examples for your work.

If you need access to research from a different language, then it will be able to translate this for you. The assistant will be able to take multimodal media (text, images, video, audio, etc) and help you analyse and condense it.

As you can see, an AI assistant built right within your research tool will be extremely compelling. It will learn about your working style and will be able to predict what you need as you need it.

The goal of this assistant should be to support your deep thinking, but not influence it.

## **An AI tutor**

Being a student in any field, whether in education or as a self learner, can require a lot of work to properly understand the material. AI

taking the role of a support tutor will be a very compelling use case. As the accuracy of the AI will improve, it will become extremely useful.

Such a tutor will be able to give you personalised support, where it can help you reason about your understanding, allow you to ask questions, give you counter arguments, and simplify where necessary.

It will be able to illustrate the material by creating diagrams or animations. It will be able to review and score your work so you know how well you are performing.

And if you need to prepare for an exam, this AI tutor will be able to create a personalised revision programme, where it can set you questions and give you real-time feedback on how well you're doing.

Who knows, at some point, the examiner might actually be an AI.



# PART 7 APPS

Choosing the right note-taking app can be a very challenging thing. There are countless apps that all seem to do the same thing. I'm even creating an app to solve some of the unique problems that I feel should be solved for better knowledge management.

I don't want to recommend any apps to you directly. The reason for this is that I want this book to be timeless and not give you outdated information. The second reason is that different people want different things out of their apps.

What I will do is try to generalise how to think about the different types of apps that exist and give you an idea of what preferences work for you.

## How to choose the right note-taking app for you

### An Integrated Thinking Environment (ITE)

You probably haven't heard the term ITE before, which refers to an Integrated Thinking Environment. It is similar to the term IDE, which stands for Integrated Development Environment used by software developers.

At the core of any note-taking software is the concept of an editor. This could be as simple as Notepad on Windows, or as complex as Obsidian. But as they get more complex, they start to exhibit the features of an ITE. They can be summarised as follows:

- **Adaptable**—You have the ability to adapt the workflows to your own needs. This book is about the Zettelkasten method, but an ITE would allow you to use any method that you like.
- **Extendable**—You have the ability to extend the functionality of the app by using plugins. This usually means that the core app will have some limited functionality, but you have the ability to pick and choose which plugins you want to use to enhance it.

- **Customisable**—You have the ability to customise how you experience the app. This might be with different themes or window layouts.
- **Thinking Tools**—The app has the ability to provide tools that help you with your deep thinking. These might be backlinks, graph views, tag management and advanced querying.

When looking for the right note-taking app, you want to consider whether it is a simple tool, a highly specialised tool, or a highly customisable tool—such as an ITE.

The benefits of an ITE is that you can make it anything you want. The drawbacks of an ITE is that you can make it anything you want. If you're someone who doesn't like having to make lots of tiny choices and wants an 'out of the box' experience, then an ITE might not be right for you.

## What you see is what you get (WYSIWYG)

The term WYSIWYG—What You See Is What You Get—refers to the text editors that show you what the final version would look like as you type. Microsoft Word is a great example of a WYSIWYG editor where you can literally see the text on a virtual page. This would be different to plain text editors where you cannot visually see the formatting of fonts, colours, bold and italics.

If this is something you quite like working with, then a WYSIWYG editor might be the best choice for you. Most note-taking apps work like this, where some have more capabilities than others. Writing your notes in Markdown is a common alternative to WYSIWYG.

## Markdown as a primary editor

Markdown is a simplified text formatting notation that allows you to insert headings, bold, italics, links and various other elements into your text without needing a WYSIWYG editor.

Some editors allow you to use Markdown as the primary input type, but display it formatted like a WYSIWYG editor. Obsidian fits this category, but you need to know Markdown to apply any formatting.

Markdown was created in 2004 by John Gruber in collaboration with Aaron Swartz. It came about at a time where the only popular tool to markup text was to use HTML for presenting on the web. So Markdown was conceived to make it easier to write and format text without having to know or use complex HTML tags or formatting tools.

One of the major benefits of using Markdown is that the files are extremely portable. They can be stored on your computer's file system with the .md extension and can be read using any plain text editor. This is very different to a proprietary WYSIWYG format which requires specialist software to interpret them.

Markdown is not for everyone. It is not a visual note-taking format so you can't use a wide range of font styles, colours or layouts. But it is fast to work with as you can write notes entirely with the keyboard and not need to switch to using a mouse.

## **Long vs short notes**

The main theme of this book as you've guessed by the title is to write atomically. This means your notes should be short and concise. The note-taking apps you choose can either encourage or discourage this.

Some apps encourage long form notes, such as Obsidian. Other apps encourage short form notes, such as Tana or Supernotes.

Think carefully about how you are using your note-taking software. Are they slipping you into writing longer, more verbose notes that make it harder to manage and reason about?

## Local vs cloud vs hybrid

One of the most contentious aspects of any knowledge management software is who owns your notes. While you the user should 'own' the notes, this refers to where they are stored. Apps like Notion store your notes entirely in the cloud. If you lose access to your account, you lose access to your notes.

Other apps like Obsidian use your file system for all your notes, which means you are responsible for them.

There are benefits and drawbacks to each, and there is no right answer as it depends on your own personal preferences.

Fully offline apps store your notes on your computer. You have full control over them, but you are responsible for backing them up. They benefit from being fully private as access to your computer would be needed to expose them. But, you may lack the ability to work on different devices as your notes are stored on only one computer.

Generally speaking, offline only apps lack revision history as the filesystem is the main and only copy of the notes. The apps could overcome this, but it's not a common feature.

Cloud only apps are where your notes are stored in the cloud. They benefit from being accessible from any compatible device and with the option for collaborative editing with other people. The drawbacks are that you don't control the notes and they are often in a proprietary format. You may be able to export them, but you have to remember to do it, and what they are exported to as might be difficult to use in another app.

These apps are generally monthly subscriptions as it requires cloud hosting. The major drawback though for some is the question of how secure your notes are on their servers. Could a hacker or rogue employee expose the notes? Could a server outage corrupt or lose your notes?

Then there are hybrid apps. These aim to solve the problem of making the notes accessible and portable at all times. They have the added benefit of synchronising your notes to other devices—usually for a monthly fee. While the question about the security of your notes in the cloud is still relevant, it provides the best all-round benefits of allowing you to be in full control. You have full flexibility over where you can access your notes.

As you can see, it is really down to personal preference. The question you need to decide is:

1. Do you value privacy and control over simplicity?
2. Do you value simplicity over privacy?

If you worry that someone else might access your notes in the cloud, then opt for an offline only app. If you don't want to worry about backing up your notes and just want to get on with your knowledge management, then a cloud or hybrid app might be best for you.

## **Desktop, tablet or mobile**

Another consideration to think about is what device you want to access your notes on. Some apps are desktop only, some are platform specific such as Mac only, and some are web only.

If having your notes accessible on your smartphone is critical, then you will probably need a cloud first or hybrid note-taking app.

If you know you'll only be note-taking on your desktop, then a desktop app might be the best choice.

If you want to work on your desktop and occasionally on your tablet, then a cloud only or hybrid app might be ideal.

So consider where you want to access your notes and what platforms you need it to work with. Also consider your budget. Some apps will

allow you to synchronise through iCloud or Google Drive, while others will require you to pay a monthly subscription.

## The future of note-taking

So what does the future of note-taking look like? We've explored what AI could provide, but there are other things to consider as well.

When it comes to the tools we use, I can see there being further innovation in the use of tagging, filtering and custom properties. As software developers understand the problem of knowledge management more, these features will lend themselves very well to helping you navigate, organise and categorise your notes.

AI will continue to be an integral part of some applications. Today we have the ability to write content based on your existing notes. We will start to see automatic tagging and content suggestions. Where AI takes note-taking is yet to be known.

Voice will become a powerful aid and by combining it with AI we'll be able to have full conversations with our apps. We'll ask questions and it will talk back.

Much more work is to be done to explore the use of collective note-taking. This is where we no longer have one person thinking deeply about a topic but a group of people. How will the tools enhance and adapt to make this possible? What will be the challenges of having different people thinking about the same problem?

Augmented Reality (AR) will change how we interact with computers. With companies like Apple entering the market in 2024, it has the potential to change our relationship with computers in terms of spatial computing. The visual representation of our knowledge can come to life as we learn and interact with information, and AI will automate a lot of this.

Virtual Reality (VR) will help us create immersive worlds that enhance our ability to think deeply. If we're exploring what it's like to

be someone, we can step into that person's shoes. Pivotal moments in history can be captured using 360° camera technology or even 3D camera technology. We'll be able to relive moments that deepen our understanding and compassion for the answers we seek.

## **Flowtelic**

Writing this book has allowed me to think deeply about what knowledge management really means. I'm by no means complete in my thinking and there is much more to learn.

But it has made me conclude that what I seek in my own knowledge management is a far cry from the tools that allow me to do it. Writing this book is an exercise that helps me see through a lens that shapes the future of my own note-taking app, Flowtelic.

My mission is to help you think deeply and create the best, most insightful work that can inspire future generations of thinkers and doers.

That may be reading better, taking better notes or creating your own projects. I want you to enjoy it, but also have the tools that pull you forward with minimal effort. I want you to start small, get the right habits and find yourself surprised at how far you have come.

And while I teach my interpretation of the Zettelkasten note-taking method, I want you to have the tools to define your own workflows and practices that help you get there.

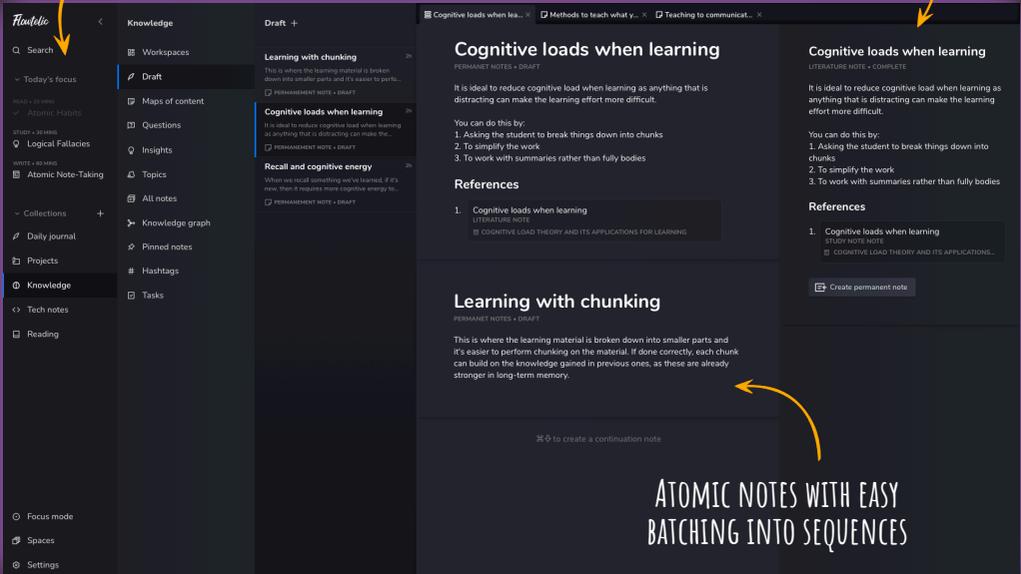
So I would like to invite you to join me on this journey, to create the best note-taking app that helps you become the best thinker you can be. Head over to <https://join.flowtelic.com> so you don't miss out.

# Flowtelic

# DESIGN CONCEPTS

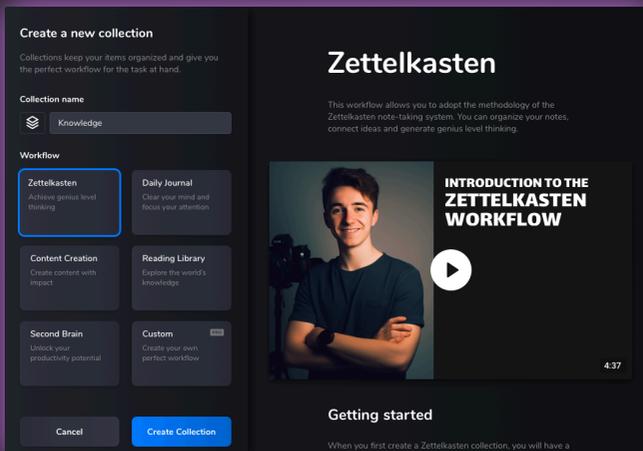
DAILY FOCUS FOR TIME-BOXED  
LEARNING AND WRITING

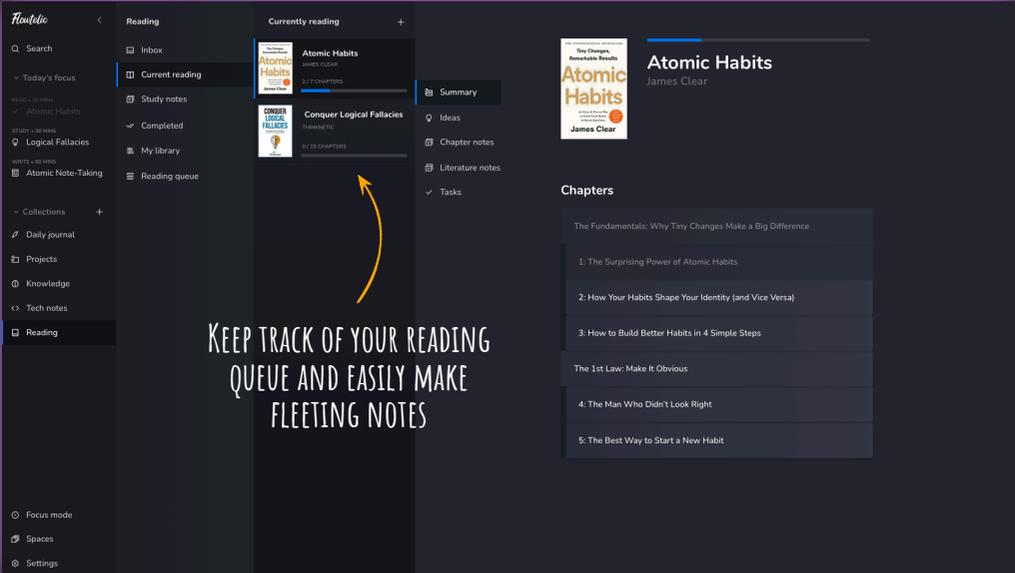
PINNED NOTES FOR EFFORTLESS  
PROCESSING OF LITERATURE NOTES  
INTO FLEETING NOTES



ATOMIC NOTES WITH EASY  
BATCHING INTO SEQUENCES

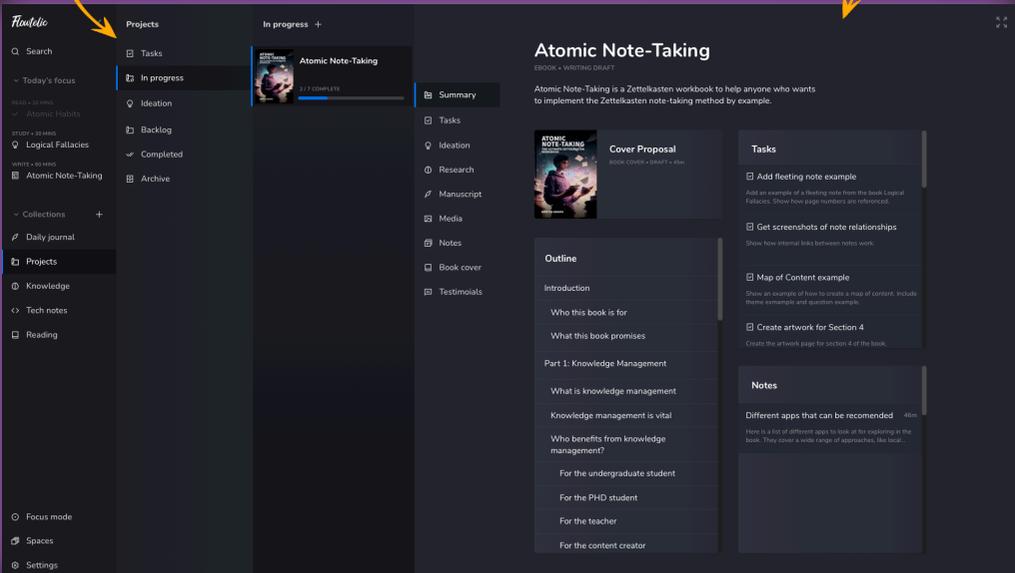
POWERFUL WORKFLOWS WITH THE  
ABILITY TO BUILD YOUR OWN





**QUERIES TO THINK OF YOUR NOTES LIKE A DATABASE**

**CREATE YOUR NEXT MASTERPIECE, WITH PROJECT BASED WORKFLOWS**



**DISCLAIMER: THESE ARE DESIGN CONCEPTS AND IT'S FULLY OPEN TO CHANGE AS THE APP IS DEVELOPED AND EVOLVES**

## Final Thoughts

I hope that you have enjoyed reading this book and that you have found it useful. I aim for it to be the missing guide to help you as you embark on a wonderful journey of learning and sharing.



I'm excited to see where knowledge management goes over the next few years as more people realise its potential and give it a go.

If you would like to continue following the work that I do, here are a few places you can find me.

Connect on X. I'm a programmer at heart and love to share my thoughts and progress on this social media platform.

<https://go.media.io/x>

You'll also find me on Threads:

<https://go.media.io/threads>

Subscribe on YouTube. A lot of this work has come from the videos I've published and the comments I've received. I will continue publishing ideas and tutorials on YouTube.

<https://go.media.io/youtube>

Weekly newsletter. I publish a weekly newsletter that aims to give you one 'ah-ha' moment in a short concise email. So if you enjoy thinking outside the box and seeing the world a little differently, do consider subscribing.

<https://go.media.io/newsletter>

Join the Flowtelic waitlist. Now that this book is written, I can start to put the ideas into practice in my own note-taking app. It's a passion project and I invite you to follow along with how it progresses.

<https://join.flowtelic.com>

Share your thoughts. I would love to hear from you, what you plan to use your Zettelkasten for, and how you are getting on with the book.

You can reach out to me at [martin@meda.io](mailto:martin@meda.io). I'll do my best to respond.

Thank you!