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# **lernOS Zettelkasten**

Learn to work with the Zettelkasten

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## 1 About lernOS

lernOS is a method of self-organization for people living and working in the 21st century. To be successful today, you need to be constantly learning, organizing and developing. No one else is responsible for this process. You have to take care of it yourself (self-directed, lifelong learning).

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### 1.1 Lebenslanges Lernen und Wissensarbeit

Wir befinden uns gerade in einem sehr dynamischen Übergang von einer Industrie- zu einer Wissensgesellschaft<sup>2</sup>: Kennzeichnend hierfür ist, dass Regeln und Normen durch Lernprozesse kontinuierlich in Frage gestellt werden (s.a. Merkmale der Wissensgesellschaft<sup>3</sup>).

In dieser Gesellschaft können wir als Einzelpersonen eigentlich nur durch Lernen erfolgreich sein und zusammen mit Anderen zum Wohlergehen aller beitragen.

<sup>1</sup><https://creativecommons.org/licenses/by/4.0/deed.de>

<sup>2</sup><https://de.wikipedia.org/wiki/Wissensgesellschaft>

<sup>3</sup>[https://www.researchgate.net/publication/283061140\\_Merkmale\\_der\\_Wissensgesellschaft](https://www.researchgate.net/publication/283061140_Merkmale_der_Wissensgesellschaft)



Autor/in: geschmacksRaum®

Unter Lernen versteht man den absichtlichen oder beiläufigen Erwerb von Wissen oder Fähigkeiten. Dieser Lernprozess führt zu relativ stabilen Veränderungen des Verhaltens, Denkens oder Fühlens, aufgrund von Erfahrungen oder neuen Erkenntnissen.

1996 wurde mit dem Delors Report<sup>4</sup> von der Europäischen Kommission ein Gesamtbild des Lebenslangen Lernens ("learning throughout life") gezeichnet und die vier Säulen, die insbesondere in die Aus- und Weiterbildung integriert werden sollten, benannt:

- **Learning to know** - ein breites Allgemeinwissen mit der Möglichkeit, eine kleine Anzahl von Themen zu vertiefen.
- **Learning to do** - nicht nur berufliche Fähigkeiten zu erwerben, sondern auch die Kompetenz, mit vielen Situationen umzugehen und in Teams zu arbeiten.
- **Learning to be** - die eigene Persönlichkeit zu entwickeln und mit wachsender Autonomie, Urteilsvermögen und Eigenverantwortung, handeln zu können.
- **Learning to live together** - durch die Entwicklung eines Verständnisses für andere Menschen und die Wertschätzung von wechselseitigen Abhängigkeiten.

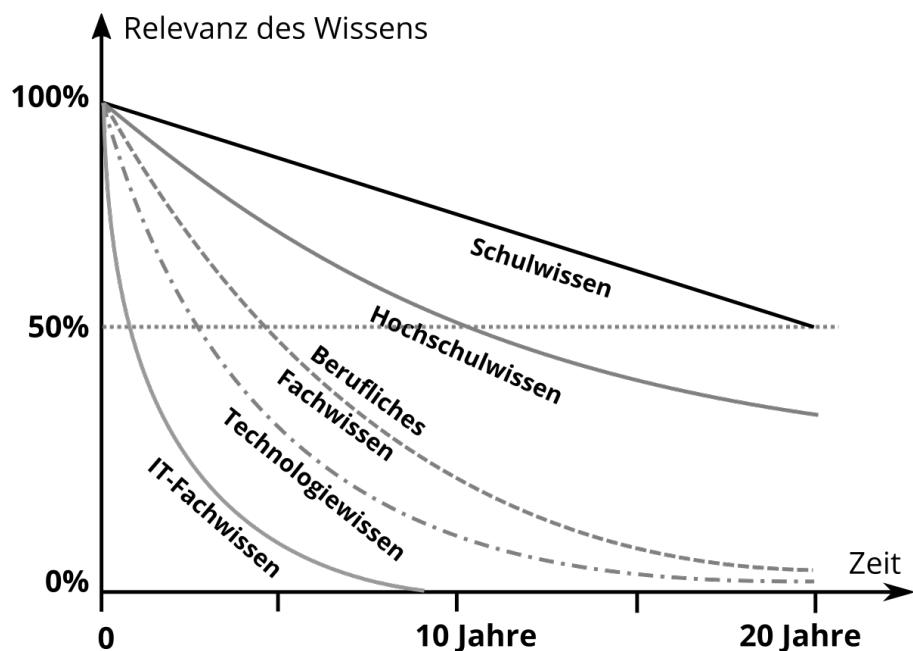
Es gibt aber auch ganz praktische Gründe, die lebenslanges Lernen für dich notwendig machen. Wie man an der Grafik der Halbwertzeit des Wissens<sup>5</sup> erkennen kann, so verlieren einige Wissensarten schnell an Aktualität und machen daher ständiges Lernen schlichtweg erforderlich. Auch wenn Bereiche wie das Schulwissen einigermaßen stabil bleiben, ist der Bedarf Neues zu Lernen - besonders im Technik- und IT-Bereich - besonders groß.

Das bedeutet für die Bürger einer Gesellschaft, dass sie sich auch nach absolviertter Ausbildung durch Schule und Hochschule kontinuierlich weiterbilden sollten, um nicht den Anschluss zu verlieren. Diesen Lernprozess, der von der Geburt bis zum Tod hin reicht, bezeichnet man als lebensbegleitendes oder lebenslanges Lernen<sup>6</sup>.

<sup>4</sup>[https://en.wikipedia.org/wiki/Delors\\_Report](https://en.wikipedia.org/wiki/Delors_Report)

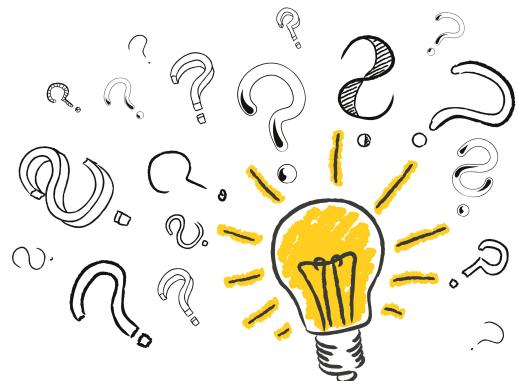
<sup>5</sup>[http://www.online-lehrbuch-bwl.de/lehrbuch/kap3/oe\\_le/oe\\_le.pdf](http://www.online-lehrbuch-bwl.de/lehrbuch/kap3/oe_le/oe_le.pdf)

<sup>6</sup>[https://de.wikipedia.org/wiki/Lebenslanges\\_Lernen](https://de.wikipedia.org/wiki/Lebenslanges_Lernen)



**Abbildung 1:** Halbwertszeit des Wissens (aus Schüppel, J.: Wissensmanagement. Organisatorisches Lernen im Spannungsfeld von Wissens- und Lernbarrieren, eigene Darstellung)

Bis zur ersten Ausbildung kümmern sich in den meisten Fällen nicht nur die Eltern, sondern auch der Staat um Lernen und Bildung. Anschließend muss man es für sich selbst organisieren<sup>7</sup>.



Autor: Daniel Berkmann

<sup>7</sup><https://de.wikipedia.org/wiki/Selbstorganisation>

### 1.1.1 Wissensarbeit

Peter Drucker weist in seinem Buch *Landmarks of Tomorrow* schon Ende der 1950er Jahre auf einen Wandel in der Arbeitswelt in Richtung wissensintensiver Arbeitsaufgaben, kurz Wissensarbeit<sup>8</sup>, hin. Der Wissensarbeiter zeichnet sich dadurch aus, dass er über die Arbeitsaufgabe und das notwendige Wissen besser Bescheid weiß als die Manager der Organisation, und sich deshalb - im Gegensatz zum Taylorismus<sup>9</sup> bzw. dem Scientific Management<sup>10</sup>, bei dem zwischen Kopf- und Handarbeit getrennt wird - weitestgehend selbst organisiert.

Der Organisationssoziologe Hellmut Willke definiert Wissensarbeit<sup>11</sup> als Tätigkeiten wie Kommunikation, Transaktion und Interaktion, die dadurch gekennzeichnet sind, dass sie Wissen erfordern, das nicht einmalig im Leben, etwa durch Erfahrung, Initiation, Lehre, Fachausbildung oder Professionalisierung, erworben wurde und dann kontinuierlich angewendet werden kann. Stattdessen ist genau das Wissen, das im lebenslangen Lernprozess entsteht für die Wissensarbeit charakteristisch und handlungsanleitend. Aus diesem Grund ist relevantes Wissen nicht statisch, sondern sollte

1. kontinuierlich revidiert,
2. permanent als verbesserungsfähig angesehen,
3. prinzipiell nicht als Wahrheit, sondern als Ressource betrachtet werden und
4. untrennbar mit Nichtwissen gekoppelt sein.

Offensichtlich birgt Wissensarbeit Risiken, denn was heute gilt, kann morgen bereits ungültig sein.

Folgende Tätigkeiten gelten, laut der Studie Tätigkeiten und berufliche Anforderungen in wissensintensiven Berufen<sup>12</sup>, als besonders wissensintensiv:

- Forschen
- Entwickeln
- Recherchieren
- Dokumentieren
- Ausbilden
- Unterrichten
- Organisieren fremder Arbeitsabläufe (ja, Manager und Führungskräfte sind auch Wissensarbeiter :-)

Wenn dein Arbeitsalltag zu großen Teilen aus einer oder mehrere dieser Tätigkeiten besteht, kannst du dich zu den Wissensarbeitenden zählen und du gehörst zur Kernzielgruppe dieses Leitfadens.

<sup>8</sup>[https://en.wikipedia.org/wiki/Knowledge\\_worker](https://en.wikipedia.org/wiki/Knowledge_worker)

<sup>9</sup><https://de.wikipedia.org/wiki/Taylorismus>

<sup>10</sup>[https://de.wikipedia.org/wiki/Scientific\\_Management](https://de.wikipedia.org/wiki/Scientific_Management)

<sup>11</sup>[https://www.researchgate.net/publication/41011087\\_Organisierte\\_Wissensarbeit](https://www.researchgate.net/publication/41011087_Organisierte_Wissensarbeit)

<sup>12</sup><https://lit.bibb.de/vufind/Record/DS-131131>



Autor: timothyh

### 1.1.2 Produktivität von Wissensarbeit

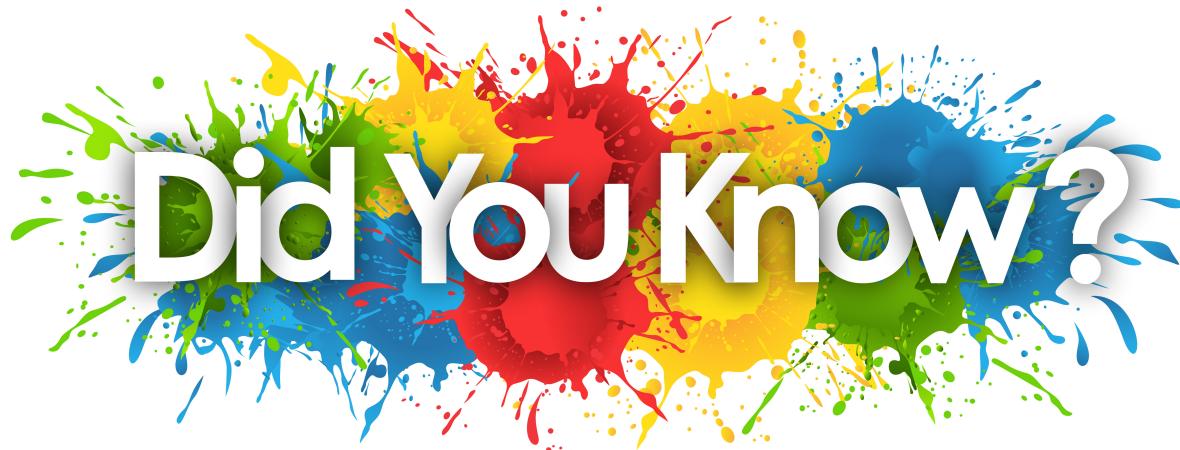
Die Produktivität<sup>13</sup> ist klassisch definiert als das Verhältnis von erzeugten Produkten zu den dafür benötigten Produktionsfaktoren. Peter Drucker fasst im Buch “Management Challenges for the 21st Century” die Produktivität von Wissensarbeitern in sechs Faktoren zusammen:

1. Die Produktivität der Wissensarbeiter erfordert, dass wir uns als erstes fragen **Was ist die Aufgabe?**
2. Wissensarbeit verlangt von uns, dass wir die Verantwortung für die Produktivität auf einzelne Wissensarbeitende übertragen, dazu müssen wir ihnen einen Vertrauenvorschuss geben, denn **Wissensarbeitende müssen sich selbst managen**. Dafür muss ein autonomer Handlungsspielraum vorhanden sein.
3. **Kontinuierliche Innovation** ist ein Teil der Arbeit, die in der Aufgabe und Verantwortung von Wissensarbeitenden steht.
4. Wissensarbeit geht einerseits mit einem **kontinuierlichen Lernprozess** und andererseits mit einem **kontinuierlichen Lehren** durch die Wissensarbeitenden einher.
5. Die **Produktivität der Wissensarbeitenden Fachkraft** ist primär keine Frage der Quantität der Ergebnisse. Der Teufel steckt oftmals im Detail, deshalb ist Qualität mindestens genauso wichtig.
6. Abschließend erfordert die Produktivität von Wissensarbeitenden, dass **Wissensarbeitende ein „Aktivposten“** und nicht ein “Kostenfaktor” sind und demgemäß behandelt werden. Wissensar-

<sup>13</sup><https://de.wikipedia.org/wiki/Produktivit%C3%A4t>

beitende sind folglich dann besonders produktiv, wenn sie für die Organisation arbeiten wollen und nicht eine der vielen Wahl-Möglichkeiten wählen.

Der viel beachtete TED-Vortrag von Dan Pink zeigt genau diesen Zusammenhang der Bedeutung von Autonomie, dem kontinuierlichen Lernen (Mastery) und der selbständigen Exploration bzw. dem Herausfinden einer relevanten Arbeitsaufgabe (Purpose), die für die Arbeit im 21. Jahrhundert charakteristisch ist Über die überraschende Wissenschaft der Motivation<sup>14</sup>.



Autor/in: Nali

## 1.2 Dein lernOS Canvas - Überblick über Wissens- und Lernbedarfe

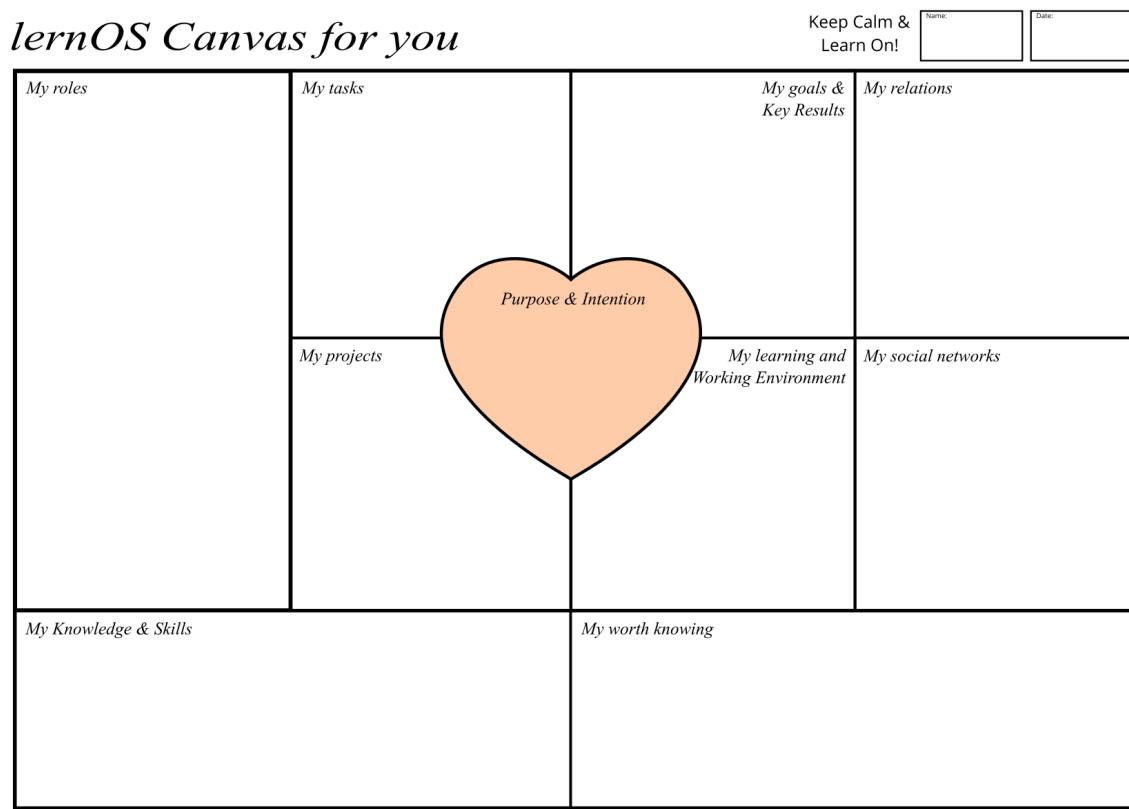
Mit diesem Canvas kannst du dein Lernen planen und dabei einen guten Überblick behalten, also nichts Wichtiges vergessen. Die visuelle Struktur erleichtert dir auch, die einzelnen Bestandteile aus denen dein aktueller Wissens- und Lernbedarf besteht, zu überprüfen und vorhandene Ressourcen mit deinem Lernbedarf abzulegen. Denn ein Bild sagt mehr als Tausend Worte! Du kannst es zum Beispiel auch für die parallele Bearbeitung mehrerer Bereiche verwenden.

Alex Osterwalder hatte als erster die Idee für einen lernOS Canvas. Er entwickelte auch den [Business Model Canvas ([https://en.wikipedia.org/wiki/Business\\_Model\\_Canvas](https://en.wikipedia.org/wiki/Business_Model_Canvas))], den man für die Erarbeitung von Geschäftsmodellen nutzt. Beide folgend derselben Grundstruktur und sollten von dir zunächst als Einstieg ausgefüllt werden. Auf diese Weise bekommst du einen passenden Überblick. Der lernOS Canvas<sup>15</sup> **ProTip:** Sei flexibel und arbeite mit Haftnotizen, die du jederzeit nach Bedarf verwenden kannst.

Im oberen Teil des Canvas kannst du deinen Namen und das Datum der Erstellung bzw. letzten Änderung eintragen. Wenn du mit dem Canvas elektronisch arbeiten willst, kannst du ihn z.B. in OneNote oder ein

<sup>14</sup><https://www.youtube.com/watch?v=rrkrvAUbu9Y>

<sup>15</sup><https://raw.githubusercontent.com/cogneon/lernos-zettelkasten/main/en/src/images/lernOS-Canvas-for-you-Canvas-de.png>



**Abbildung 2:** lernOS Canvas

digitales Whiteboard kopieren. Für die erste Befüllung des Canvas kannst du dir z.B. folgende Fragen stellen:

- **Zweck & Purpose:** Wofür lebst du? Was möchtest du in deinem Leben erreichen?
- **Ziele & Schlüsselergebnisse:** Welche Ziele hast du in den nächsten 12 Wochen? Welche messbaren Ergebnisse gibt es zu den Zielen?
- **Meine Rollen:** Was sind deine aktuellen Rollen? Welche Ziele ergeben sich aus diesen?
- **Meine Aufgaben:** Was sind deine aktuellen Aufgaben? Welche Ziele ergeben sich daraus?
- **Meine Projekte:** Was sind deine aktuellen Projekte? Welche Ziele ergeben sich aus diesen?
- **Meine Sozialen Netzwerke:** Welche internen und externen sozialen Netzwerke (digital und analog) helfen dir bei der Vernetzung?
- **Meine Lern- und Arbeitsumgebung:** Wie sieht deine Lern- und Arbeitsumgebung aus (Infrastruktur, Inhalte, Tools, Methoden etc.)?
- **Mein Wissen & Meine Fähigkeiten:** Welche Wissensgebiete und Fähigkeiten sind für deine Ziele, Rollen, Aufgaben und Projekte wichtig? Was musst du noch lernen?
- **Meine Wissenswerte:** Welche WissensWerte (Dokumente, Checklisten, Videos etc.) hast du? Welche davon kannst du deinem Netzwerk anbieten?

### 1.3 lernOS Flow - Arbeitsablauf für modernes Arbeiten und Lernen

Mit Flow<sup>16</sup> wird das als beglückend erlebte Gefühl eines mentalen Zustand bezeichnet, bei dem du konzentriert bist und völlig in einer Tätigkeit aufgehst. Im Flow gibt es eine gute Balance zwischen den Anforderungen der Tätigkeit und den eigenen Fähigkeiten, so dass weder Überforderung noch Unterforderung auftreten. Um in unserer schnellen und komplexen Lebens- und Arbeitswelt Konzentration und Fokussierung zusammenzubringen, braucht es dafür ein gutes System, mit dem man in der Lage ist sich selbst zu organisieren.

Für den lernOS Flow sind deswegen auf 13-wöchige Zyklen, die in Anlehnung an Scrum<sup>17</sup> **lernOS Sprints** genannt werden. Jeder Sprint beginnt mit Planung und Zielfindung (Woche 0) und endet mit einer Retrospektive (Woche 12). Als Rhythmus bieten sich die vier Quartale eines Jahres an, das kannst du aber an deine Vorliebe anpassen.

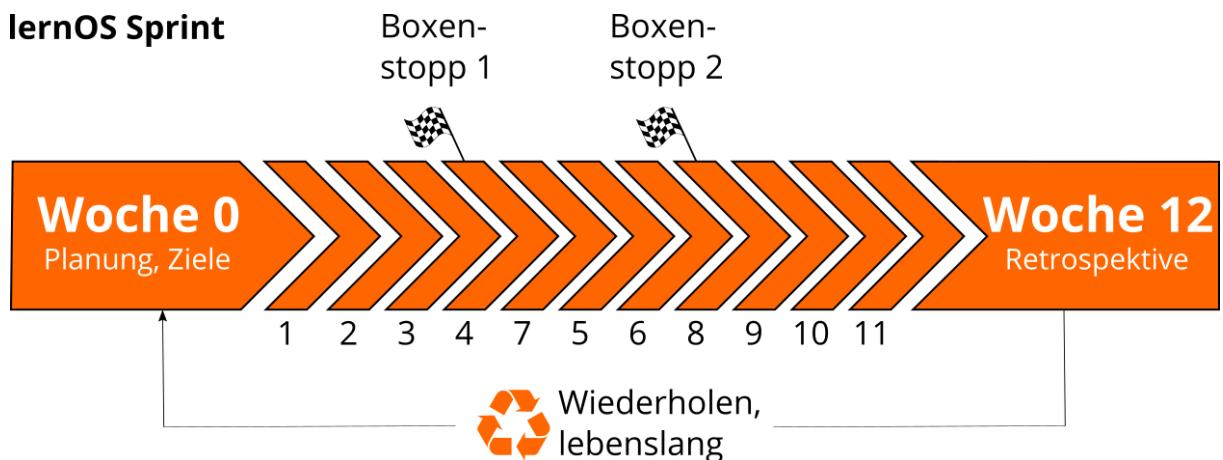
Der lernOS Flow ist ein Arbeitsablauf, den Wissensarbeiter\_innen und Lebenslang Lernende für ihr Selbstorganisation verwenden können. Hierfür wird auf Praxis-erprobte Methoden und Ansätze zurückgegriffen:

1. **Objektives & Key Results (OKR)** für zielgerichtetes und fokussiertes Arbeiten und Lernen durch die Definition von Lernzielen und gewünschten Ergebnissen (s.a. OKR<sup>18</sup> bei Google).

<sup>16</sup>[https://de.wikipedia.org/wiki/Flow\\_\(Psychologie\)](https://de.wikipedia.org/wiki/Flow_(Psychologie))

<sup>17</sup><https://scrumguides.org>

<sup>18</sup><https://rework.withgoogle.com/guides/set-goals-with-okrs/steps/introduction/>



**Abbildung 3:** lernOS Sprint

2. **Getting Things Done (GTD)** für produktives und stressfreies Arbeiten und Lernen, indem die Selbstorganisation durch einen 5-Schritte-Prozess strukturiert wird (s.a. GTD<sup>19</sup> von David Allen).
3. **Working Out Loud (WOL)** für das offene Teilen von Arbeitsergebnissen im Netzwerk und das Erzählen von Hintergrundgeschichten (s.a. WOL Definition<sup>20</sup> von Bryce Williams, WOL Circle Guides<sup>21</sup> von John Stepper).

Im Diagramm zum lernOS Flow kannst du die Elemente aus den einzelnen Methoden anhand der farblichen Markierung erkennen (OKR: rot, GTD: grün, WOL: blau):

<sup>19</sup><https://gettingthingsdone.com>

<sup>20</sup><https://thebryceswrite.com/2010/11/29/when-will-we-work-out-loud-soon/>

<sup>21</sup><https://workingoutloud.com/de/fur-dich>



Das Bild ist am besten von links nach rechts zu lesen. Es gibt zwei mögliche Startpunkte (grüne Kreise) und einen Endpunkt (roter Kreis). Mit dem unteren Startpunkt befasst man sich eher mit dem kurzfristigen und operativen Umgang mit Wissen und Lernen. Der obere Startpunkt bildet die langfristige und strategische Perspektive ab (s.a. GTD - The 6 Horizons of Focus<sup>22</sup>).

**ProTip:** wenn du privat oder beruflich mit Microsoft 365 arbeitest, findest du im Anhang die Microsoft 365 Edition des lernOS Flows.

#### 1.4 lernOS Workplace - Deine Lernumgebung und dein Wissensarbeitsplatz

Beim Begriff des modernen Lern- und Arbeitsortes denken viele sofort an den “Digitalen Arbeitsplatz” oder das “Digitale Klassenzimmer” mit ihren vielen digitalen Tools. Deswegen sei diesem Kapitel folgendes Zitat vorangestellt:

A fool with a tool is still a fool (Ron Weinstein)

Mindset, Skillset & Toolset statt nur Toolset: Wenn du an die Gestaltung der eigenen Lernumgebung oder des eigenen Wissensarbeitsplatzes gehst ist vielmehr eine ausgewogene Betrachtung von drei

<sup>22</sup><https://gettingthingsdone.com/2011/01/the-6-horizons-of-focus/>

Bereichen wichtig:

- **Mindset** - Welche Haltung habe ich zum Lernen und wie zeigt sich das in meiner Lernumgebung/meinem Wissensarbeitsplatz (s.a. Growth Mindset von Carol Dweck, Open Mindset von Gary Hamel)?
- **Skillset** - wie gut sind meine Kompetenzen und Fähigkeiten in Bezug auf das Lernen (s.a. (Framework for 21st Century Learning<sup>23</sup>, DigiComp 2.1 Framework<sup>24</sup>)?
- **Toolset** - Nutze ich zeitgemäße Tools, Methoden und Formate in meinen Lern- und Arbeitsprozessen (s.a. Web 2.0<sup>25</sup>, Agile Methoden<sup>26</sup>)?



**Abbildung 4:** lernOS Wheel

Dein **lernOS Workplace** ist eine sehr individuelle Angelegenheit, deswegen solltest du dir diesen jeweils möglichst gut nach deinen Bedürfnissen gestalten. In der Regel ist dieser Platz auch nicht nur an einem Ort, sondern an mehreren. Bei Schüler\_innen kann das z.B. die Schule und das eigene Zimmer sein. In Zeiten von verteilter und mobiler Arbeit kann jeder Ort dein Lern- und Arbeitsort sein.

Mit der folgenden Vorlage in Anlehnung an das Seek>Sense>Share Frameworks<sup>27</sup> von Harold Jarche

<sup>23</sup><http://www.p21.org/our-work/p21-framework>

<sup>24</sup><https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/digcomp-21-digital-competence-framework-citizens-eight-proficiency-levels-and-examples-use>

<sup>25</sup><https://www.oreilly.com/pub/a/web2/archive/what-is-web-20.html>

<sup>26</sup>[https://de.wikipedia.org/wiki/Agilit%C3%A4t\\_\(Management\)](https://de.wikipedia.org/wiki/Agilit%C3%A4t_(Management))

<sup>27</sup><https://jarche.com/2014/02/the-seek-sense-share-framework/>

kannst du deinen aktuellen lernOS Workplace beschreiben, deine Gedanken dazu mit anderen teilen und Ideen für die Zukunft entwickeln:



**Abbildung 5:** lernOS Workplace

Das trifft auch auf den digitalen Teil der persönlichen Lernumgebung zu: alle Lernenden müssen sich geeignete Tools auswählen und einrichten.

Die folgende Tabelle zeigt Beispiele von internen (Intranet) und externen (Internet) Toolbeispielen zu den einzelnen Kategorien des lernOS Workplace:

| Tool-Kategorie | Beschreibung | Beispiele Internet       | Beispiele Intranet    |
|----------------|--------------|--------------------------|-----------------------|
| <b>Suche</b>   |              | Bing, DuckDuckGo, Google | Microsoft Search      |
| <b>Browser</b> |              | Chrome, Edge, Firefox    | Chrome, Edge, Firefox |

| Tool-Kategorie                           | Beschreibung   | Beispiele Internet  | Beispiele Intranet   |
|--|--|---|--|
| <b>Feedreader</b>                        | Abonnieren und Empfangen von Nachrichten im Format RSS oder ATOM |   |  |
| <b>Podcatcher</b>                        | Abonnieren, Empfangen und Anhören von Podcasts                   | Apple Podcasts App, Castro, Overcast                            | Microsoft Stream   |
| <b>Digitales Notizbuch</b>               | Persönliche, digitale Notizen verwalten                          | Evernote  | OneNote, Joplin  |
| <b>Wiki</b>                              |  | Wikipedia, Fandom   | Confluence, DokuWiki, MediaWiki  |
| <b>Office-Paket</b>                      |  | G Suite, Collabra   | Office 365, Libre Office   |
| <b>Videokonferenz-Software</b>           | Durchführung von Audio- und Videokonferenzen                     | Jitsi, Google Hangouts Meet, Skype                              | Zoom, GoToMeeting, Microsoft Teams, Skype for Business, WebEx, BlueJeans |
| <b>Mindmap-Software &amp; Outliner</b>   | Erstellung und Bearbeitung von hierarchischen Themenstrukturen   | Mindmeister   | XMind, MindManager, Freemind, Freeplane                                  |
| <b>Webseite</b>                          |  | Jimdo, Squarespace, Wordpress                                   | SharePoint Online, Confluence  |
| <b>Weblog</b>                            | Schreiben und Veröffentlichen von Blog-Beiträgen                 | Wordpress, Medium, LinkedIn (Artikel), Tumblr                   | HCL Connections, Jive, Yammer  |
| <b>Podcast- und Video-Blog-Plattform</b> | Hochladen und Veröffentlichen von Audio- und Video-Blogs (vlogs) | YouTube, Vimeo, Podigee, Podcast Plattform, Wordpress + Podlove | Microsoft Stream, Kaltura, Vimp  |
| <b>Filesharing</b>                       | Dateien in Ordnern organisieren                                  | Dropbox, Google Drive   | OneDrive, SharePoint Online, Nextcloud                                   |

| Tool-Kategorie                                  | Beschreibung  | Beispiele Internet  | Beispiele Intranet  |
|---|---|---|---|
| <b>Soziale Netzwerke &amp; Online-Foren</b>     | Online-Profil pflegen, Statusnachrichten schreiben, mit anderen vernetzen | LinkedIn, Twitter, Workplace by Facebook, Xing, ResearchGate, Reddit, Stackoverflow | Yammer, HCL Connections, Jive, Discourse                                    |
| <b>Chat</b>                                     | Kurznachrichten schreiben, Chat-Gruppen erstellen                         | WhatsApp, Telegram, Signal, Threema, WeChat   | Microsoft Teams, Kaizala, Slack, Mastodon, Threema, Mattermost, Rocket.Chat |
| <b>Personal Information Manager &amp; Email</b> | E-Mail, Kalender, Kontakte etc. verwalten                                 | Gmail   | Outlook   |
| <b>Aufgaben- und Zeitmanagement</b>             | Planung und Einhaltung von Zeiten für Aufgaben                            | Trello, Todoist, Things, Omnifocus  | Microsoft ToDo  |
| <b>Referenzmanager</b>                          | Verwaltung von Links und Literatur  | Zotero, Mendeley, Liquidtext  |   |

## 1.5 lernOS Memex - das “2nd Brain” der Lernenden

Die einzelnen Wissens- und Lernumgebungen sind eben so individuell, wie jeder einzelne Mensch es ist. Die Idee des lernOS Memex will hier eine gemeinsame Bezugsgröße schaffen. Memex steht für “Memory Extender” und kann als digitaler Zwilling des eigenen Gehirns, im Englischen auch “second brain” genannt, verstanden werden. Also das worum es in diesem Lernpfad u.a. geht.

Der Memex im lernOS ist ein System, dem der Nutzer vertraut und der neben allen Organisations- und Planungselementen von lernOS auch Verweise und Beschreibungen auf alle weiteren System enthält, die im Rahmen der lernOS Praxis verwendet werden.

Theoretisch kann der Memex auch analog z.B. in Form eines Notizbuchs umgesetzt werden. In der Praxis kommen aber meist digitale Notizbücher oder Scratchpads zum Einsatz (z.B. Obsidian, Logseq, Roam), da diese gegenüber analogen Varianten viele Vorteile bieten. So bieten sie z.B. unbegrenzten Platz, können durchsucht werden sowie Audio- und Videoinhalte enthalten. Mehr dazu im Lernpfad selber.

**lernOS Weekly Review Checkliste**

Mittwoch, 5. Februar 2020 11:16

**KLARHEIT SCHAFFEN**

- **Loses Papier und Materialien sammeln:** sammle alle Zettel, Flyer, Postit's, Kopien, Rechnungen und anderes physisches Material in der physischen Inbox (orange Mappe).
- **Inbox Zero:** führe den GTD-Prozess mit allen Inhalten der physischen und virtuellen Inboxen durch.
  - Outlook Posteingang (Simon Dückert, Cogneon Info, Cogneon Rechnung)
  - Twitter Nachricht
  - Twitter Lesezeichen
  - LinkedIn Nachricht
  - LinkedIn Lesezeichen
  - Outlook Posteingang + Teams Audi
  - Outlook Posteingang Siemens + Teams SHS
- **Braindump:** schreibe alles auf, was sich noch lose in deinem Kopf befindet (Projekte, To Do's, worauf warte ich, Ideen etc.).

**AUF STAND KOMMEN**

- **Aufgabenliste durchgehen:** hake alle abgeschlossenen Aufgabe in To Do ab. Markiere "Next Actions" mit "Wichtig" (Stern) und füge Fälligkeitsdaten hinzu.
- **Projekt-Aufgaben- und "Larger Outcome"-Listen durchgehen:** evaluere den Status von Projekten, Zielen und Ergebnissen einzeln, um für jedes mindestens eine nächste Aktion (Stern) festzulegen. Fehle durch die Projektpläne, Umsetzungsmaterialien und alle anderen Zwischenergebnisse (work-in-progress), um neue Aufgaben etc. freizulegen.
- **Kalender rückwärts durchgehen (2 Wochen):** prüfe, ob es zu den Terminen der letzten Woche noch Aufgaben, Referenzmaterial etc. gibt, und übernehme diese in das GTD System.
- **Kalender vorwärts durchgehen (2 Wochen):** schaue auf den Kalender der nächsten zwei Wochen (detaillierter) und der nächsten zwei Monate (größer). Erfasse alle Aufgaben, die sich daraus ergeben.
- **Warten-auf-Liste prüfen:** Markiere erledigte Warten-auf's ab. Definiere Aufgaben für noch offene Punkte.

**Abbildung 6:** Beispiel eines lernOS Memex in Microsoft OneNote von Simon Dückert



**Abbildung 7:** Zettelkasten-Methode hilft, Wissen zu verknüpfen und auszubauen

## 2 Persönliches Wissensmanagement Grundlagen

In der heutigen Zeit ist es wichtiger denn je, ständig neues Wissen und Informationen zu erlangen. Wissen alleine reicht jedoch nicht aus, um erfolgreich zu sein. Es ist ebenso wichtig, wenn nicht sogar wichtiger Wissen weiter zu denken, um es zu etwas Neuem zu verbinden. z.B. um Aufgaben und Projekte effizienter zu erfüllen, sich schnell an neue Anforderungen und Herausforderungen anzupassen, Ziele und Pläne besser zu verstehen und zu verfolgen oder die Studienzeit effizienter zu nutzen. Das ist jedoch leichter gesagt als getan. Glücklicherweise gibt es Methoden des persönlichen Wissensmanagements, die dabei helfen können. Eine dieser Methoden ist die Zettelkasten-Methode.

Die Zettelkasten-Methode basiert auf einer Bottom-Up Themenstruktur und hat das Ziel, Gedanken und Ideen an einem zentralen Ort abzulegen und diese miteinander zu verbinden, um neue Erkenntnisse zu gewinnen, Wissen zu internalisieren und fundierte Texte entstehen zu lassen. Es kann eine Weile dauern, bis man die ersten Erfolge sieht, doch wenn man die Zettelkasten-Methode kontinuierlich anwendet, wird man von der reichen Ernte profitieren.

Um die Zettelkasten-Methode erfolgreich anzuwenden, ist es wichtig, sie täglich zu nutzen. Lies und notiere deine Gedanken zum gelesenen. Formuliere deine Notizen präzise aus und verknüpfe dein Wissen miteinander. Verbinde deine Ideen und schaffe übergreifende Verbindungen. Stelle dir selbst Fragen und versuche diese zu beantworten. Durch dieses kontinuierliche Denken im Zettelkasten wirst du dein Wissen vertiefen und neue Ideen generieren.

In der Praxis kann die Zettelkasten-Methode sowohl im Berufsalltag als auch im Studium und im privaten Bereich eingesetzt werden. Sie kann dazu beitragen, fundierte Beiträge zu schreiben, umfangreiche Gedanken greifbar zu machen und das eigene Wissen zu vertiefen. Sie ist auch beim Schreiben von Artikeln, Forum-Beiträge, Social-Media Beiträge hilfreich, denn du sammelst Gedanken, bereitest sie auf und kannst sie in einem Outline direkt einfügen und hast deine Beiträge mit Tiefgang bereits zu 90% fertig.

Wobei die Methode dich unterstützen kann - Beruflich - Es erleichtert die effiziente und erfolgreiche Erfüllung von Aufgaben und Projekten. - Es unterstützt die Karriereentwicklung, indem es dabei hilft, relevantes Wissen und Fähigkeiten aufzubauen und zu demonstrieren. - Es ermöglicht eine schnellere Anpassung an neue Anforderungen und Herausforderungen im Beruf. - Es erhöht die Produktivität und die Fähigkeit, schnell Entscheidungen zu treffen. - Es verbessert die Kommunikation und Zusammenarbeit innerhalb des Unternehmens. - Privat - Es hilft dabei, die eigenen Ziele und Pläne besser zu verstehen und zu verfolgen. - Es unterstützt die Selbstorganisation und ermöglicht eine bessere Verwaltung von Zeit und Aufgaben. - Es fördert die persönliche und intellektuelle Entwicklung, indem es dabei hilft, neues Wissen und Fähigkeiten aufzubauen. - Es ermöglicht eine bessere Verwaltung von Finanzen und Ressourcen. - Es erhöht die Fähigkeit, schneller und effektiver Probleme zu lösen und Entscheidungen zu treffen. - Im Studium - Es unterstützt das Verstehen und Behalten von Lerninhalten

und erleichtert die Vorbereitung auf Prüfungen. - Es fördert die Entwicklung von Selbstlernstrategien und die Fähigkeit, sich selbstständig Wissen anzueignen. - Es ermöglicht eine effizientere Nutzung der Studienzeit und Ressourcen. - Es fördert die Fähigkeit, Zusammenhänge zwischen verschiedenen Fächern und Disziplinen herzustellen. - Es erhöht die Möglichkeiten für eine erfolgreiche Karriere und berufliche Entwicklung.

Die Zettelkasten-Methode wurde vom Soziologen Niklas Luhmann (\*8.12.1927) entwickelt, der mit ihrer Hilfe ca. 70 Bücher und 400 Artikel publizieren konnte. Und alle von hoher Qualität. Er hat seinen Zettelkasten analog benutzt. Was hätte er wohl mit einem digitalen Zettelkasten erreichen können? Finde heraus, was du erreichen kannst!

## **2.1 Links zu weiteren Informationen über das Thema Zettelkasten oder auch Persönliches Wissensmanagement (PKM)**

- Niklas Luhmann erläutert wie er mit seinem Zettelkasten arbeitet<sup>28</sup> - 27:26 - 39:47
- <https://youtu.be/gt6nRZQTYD4>
- <https://www.wissen-kommunizieren.de/category/persoenliches-wissensmanagement/>
- Niklas Luhmann - Ich denke ja nicht alles allein (Zettelkasten als Zeitgedächtnis)<sup>29</sup>
- PKM - Harold Jarche: <https://jarche.com/pkm/>
- PKM Video: [https://www.youtube.com/watch?v=HQbnoLxgx7I&ab\\_channel=HaroldJarche](https://www.youtube.com/watch?v=HQbnoLxgx7I&ab_channel=HaroldJarche)

<sup>28</sup><https://youtu.be/qRSCKSPMuDc?t=2246>

<sup>29</sup><https://youtu.be/NbncA7bDI70?t=18>



Autor/in: CrazyCloud



## 3 Lernpfad

### 3.1 Die Lernziele des Zettelkasten-Pfades

# ZETTELKASTEN-LERNZIELE

Du kannst

- Gedanken und Informationen wieder auffindbar ablegen
- Gedanken wachsen und reifen lassen
- Neue Verbindungen und Ideen in deinen Gedanken finden
- Einen auf dich passenden Workflow finden
- Deine Zettelkasten-Umgebung einmalig einrichten, verwenden und nachhaltig optimieren

#### KENNENLERNEN & SETUP

Wie wollen wir den Sprint durchführen?  
Aufgabe: Welches Format können wir anwenden? Flipped-Classroom?



#### SCHRITT 1. SPRINTZIEL

Mache einen Termin mit dir selbst und lege ein Ziel fest.  
Aufgabe: Wozu nutze ich den Zettelkasten?



#### SCHRITT 2. PKM-UMGEBUNG

Umgebung einrichten.  
Aufgabe: Welches technische Werkzeug werde ich wo einsetzen?  
Software/App/OS/Analog/Umgebung/privat-beruflich/Datenschutz/Installation/Basis MD Syntax



#### SCHRITT 3. NOTIZEN

Lerne Notizen-Inhalte genau kennen.  
Aufgabe: Was ist die Struktur / DNA einer Notiz?  
Warum schreibst du diese mit eigenen Worten?  
Übe Progressive Summarization



#### SCHRITT 4. LESEN & ERSTELLEN

Erstelle deine ganz eigenen Notizen.  
Aufgabe: Lies ein Buch, einen Artikel oder arbeite an etwas.



#### REFERENZEN

CC BY Andreas Treibing, Maris Krobath, Friederike Schoeller-Frey

#### SCHRITT 5. DAUERHAFTE NOTIZEN

Wie überarbeite ich Notizen dauerhaft?  
Aufgabe: Worin unterscheiden sich atomare Notizen von einzelnen Zetteln?



#### SCHRITT 6. IDEEN VERZETTELN

Mache die eine Struktur und überlege in der Gruppe.  
Aufgabe: Welche Ideen gehören zusammen?



#### SCHRITT 7. BOXENSTOP

Wo befindet sich die Gruppe jetzt?  
Aufgabe: Seid ihr noch auf dem Zielkurs?  
Welche technischen Werkzeuge setzt ihr wo und für was genau ein?



#### SCHRITT 8. WIEDERAUFFINDEN

Die Wiederauffindbarkeit von Informationen ist wichtig.  
Aufgabe: Mit Hilfe welcher Mittel findest du deine Informationen wieder? MOC/TAGS/Suche/allg. Verlinkung



#### SCHRITT 9. DIE 3 STUFEN

MOC- Hier erlernst du den 3stufigen Weg kennen. Aufgabe: Lerne anhand der Beispiele und konstruiere deine ganz eigene Lösung.



#### SCHRITT 10. ZETTELKASTEN-DENKEN

Du lernst, das Denken auf die Systematik deines Zettelkastens zu übertragen.  
Aufgabe: Denke laut und nach dem Zettelkastenprinzip.



#### REFERENZEN

CC BY Andreas Treibing, Maris Krobath, Friederike Schoeller-Frey

#### SCHRITT 11. DER WORKFLOW

Du findest deinen Arbeitsrythmus und einen Workflow.  
Aufgabe: Mache deine Essentials, dein Weekly, verzettle dich...





**Abbildung 8:** Der Zweck von Feedback

### 3.2 Week 0 - Circle Setup

#### 3.2.1 Theory

If you don't know each other in the Circle yet, get to know each other in week 0. Plan when you will meet, what tools you will use to share, and who will be the moderator.

Define a Circle facilitator who will handle event and time management. One of the biggest obstacles to successful Circle is discipline and time management. The moderator is not the “boss\*in” of the Circle, but a normal Circle member who takes care of a smooth event. Define the day and time of the weekly meeting. Define whether you will meet in person or virtually. Define the tools you will use for communication and documentation in the Circle. Decide which of the suggested exercises you will do in the Circle and as homework. If necessary, define rules or behavioral labels that are helpful to you.

#### 3.2.2 Guiding questions you can answer for yourselves

- Alternating Circle facilitation?
- Day and time of Weekly?
- Weekly meetings are: in person / virtual?
- Tools used for offline communication (Can everyone use them?)?
- Where do we share the results? Do we use social media channels?

- Dealing with appointments where not all can attend (e.g. if 3 participants\* cannot, the appointment is cancelled)?
- Attitude, principles for the Circle (e.g. the Circle should be fun! If you can't complete a task because you have other priorities that week, that's totally ok. We don't create additional stress)?

A very important function of the Circle is to get feedback on your goals, understanding and workflow and to give feedback to the others. To help you understand each other better in the process, take a moment to talk about your idea of constructive feedback. This includes the question “Why are you doing knowledge management?” and the principle “Compare yourself to yourself.

### 3.2.3 Exercises

- answer the guiding questions together and find a consensus
- exchange ideas about constructive feedback

### 3.2.4 Reflection part

- How can we best give each other feedback to improve our goals and understanding?
- What are our personal reasons for using knowledge management in the Circle?
- How do we adhere to the principle of “compare yourself to yourself” in terms of feedback and goals?

### 3.2.5 Learning Objective

- You gain clarity in the Circle about the approach and the organization
- You get a safe space for giving and receiving feedback.

## 3.3 Week 1 - Goal definition & appointment with yourself

Week 1 is the only week that consists of two topics. Your goal definition and making an appointment with yourself.

### 3.3.1 Goal definition

**3.3.1.1 Theory** What do you want to achieve in the next twelve weeks? You can choose a goal that is really, really important to you and with which you will make very concrete progress during the sprint. However, especially for PKM beginners, achieving the goal is not the top priority. In addition to learning



**Abbildung 9:** When writing the story of your life, don't let anyone else hold the pen

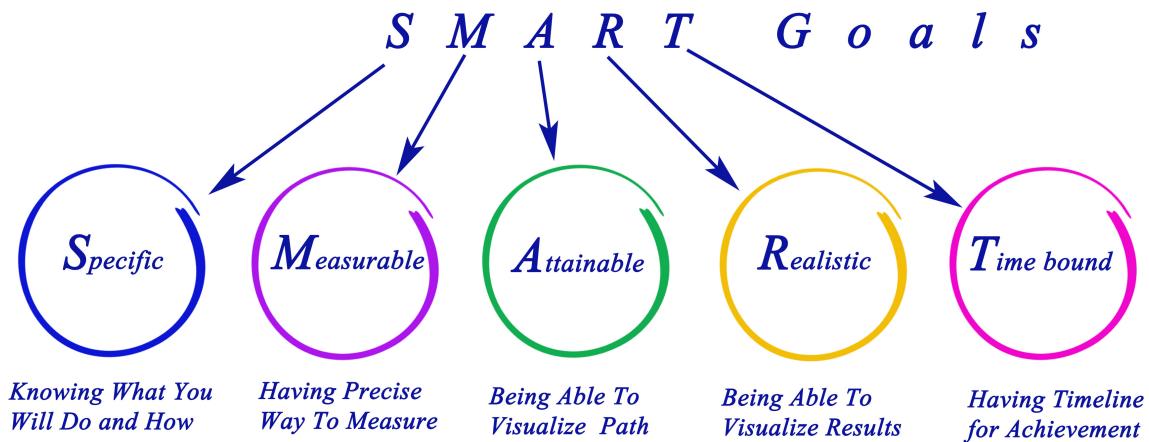
the basic knowledge, the environment, the findability and permanence of notes, the focus is still very much on regularly applying the newly gained skills. In particular and last but not least, one main thing is our focus: having a lot of fun! :D

To ensure optimal learning success, it is important to set goals that motivate you and make your progress tangible and visible. You'll want to set your goals using the SMART formula or use Google's OKR method<sup>30</sup> to define your goal. Consider whether you might want to work toward a specific product. This could be, for example, a blog article for your co-workers, or a first publication, or, or, or.... Visualize your goal. For this purpose, you can use different technical tools on the Internet.

Think about how you will share your progress in the Circle. In other words, if your first priority is to check-in, that's a bit low. Consider what documentation tools are out there that are good for logging your progress.

Define goals using the SMART formula.

<sup>30</sup>links in the “More Information” section



Autor: Dmitry

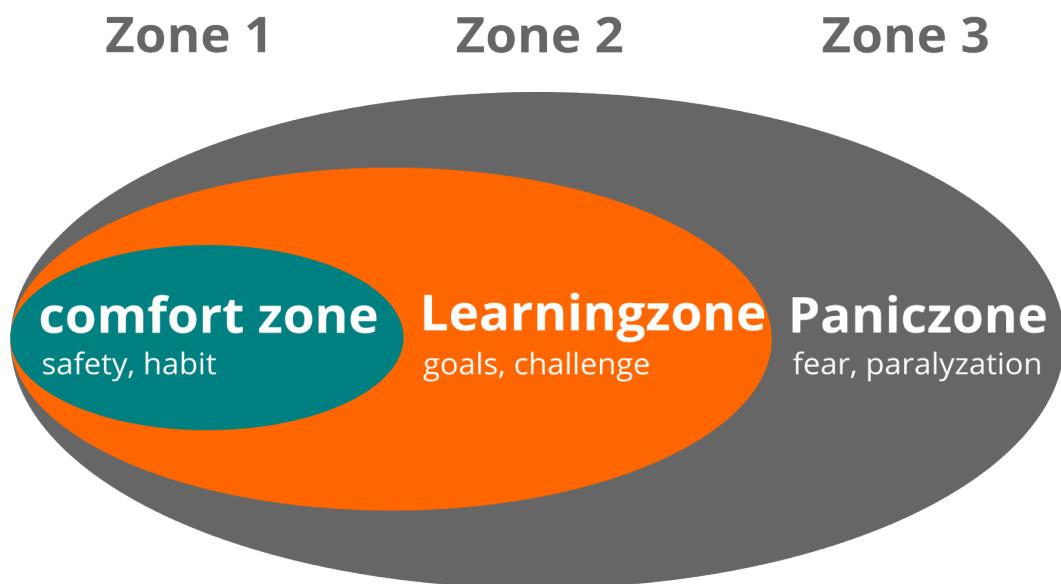
Using the SMART method is a good way to define a goal. It applies various criteria against which the goal definition is measured. This way you have the guarantee to reach a smart goal.

**Specific:** Is it really clear what you want to do, or are you perhaps too vague in your wording? What is included, and especially what is not? Only if you really know exactly what you want to do and at the same time know the limits of your intention, you can set out and be sure that you will arrive on the way in any case without getting bogged down or even losing your orientation.

**Measurable:** What must have happened so that you can say that your goal has been achieved. What work result is there then? For example, if you want to get “better” at something, what do you need to do and how often to get enough practice? Formulate in such a conclusive and measurable way that you can achieve just that. Essentially, ask yourself what you want to get better at or what exactly this “better” can be tied to. Characterize the first point, because the more specific you are in defining your goal, the more likely you are to get a result that meets your expectations, that can be further improved, and that can be markedly evaluated.

**Attractive:** Your goal must motivate you. You must want to achieve it if you want to spend 12 weeks to make it come true. Therefore, this point is especially important. It should be a goal that you have personally chosen for yourself and with which you can identify 100%. A goal that others set for me will rarely trigger the same desire in me to achieve it as one that springs from my own heart. In some explanations of the SMART formula, the A also stands for **Anchallenging**. Will mean that your goal should not be too easy. You should make a little effort and challenge yourself, because if you stay too far away from your personal limits and actually still chill in your comfort zone, you can rarely really improve. Ultimately, you need to go a little beyond your comfort zone without completely overtaxing yourself, because that’s where growth begins. Caution. Overextending yourself won’t yield sustainable results, and by and large, this learning path is meant to bring one thing above all else: a lot of fun! And

that can quickly fall by the wayside if your goals are too ambitious.



**Abbildung 10:** 3 Zonen Lernmodell

**Realistic:** The learning path goes 12 weeks and therefore you should also choose a goal that is really achievable in this time. Stay down to earth when defining your goals. You can achieve anything at a snail's pace and with perseverance. It is also key to question yourself in advance: Are you one of those people who like to choose their goals a little more challenging? How much time do you really have available each week? Does the whole thing really fit into the framework of the 12 weeks of the Learning Sprint? If it has to be, then say goodbye to one or the other idea for the time being. Ultimately, the first sprint is good training that will eventually become second nature. The current learning sprint may only have been a prelude.:-)

**Terminated:** Another important requirement of your goal that you should pay attention to is the date of completion. In the context of the learning sprint, this date can actually be determined very precisely. And that's important, too, because it gives you the opportunity to check whether you're still on track in terms of deliverables, open items, and any problems or obstacles, or whether you might need to put more energy into your work on the project or conclusively scale down your goal in order to achieve it at all. In week 7 we will look at the first interim results. A good moment to look at your own goal again from the SMART perspective and if necessary to readjust it a bit.

#### **Example of goal setting with OKRs.**

As easy as the card box is to explain, as challenging it can be to work with it at the beginning. For this

reason, we recommend setting a concrete goal and possibly starting with a small project. To make this a little more concrete, here is an example.

Nima has started to study wants to work in science in the future, so clean scientific work and the corresponding writing organization should be practiced from the beginning.

Nima's goal for week 12 in the notebook learning path is to develop a routine in using the notebook. Therefore, Nima is considering working on this very routine with an upcoming term paper. For starters, it is very challenging to write 15 pages from the note box, so it makes sense to define even more key outcomes.

The question that can help you to define the Key Results is: How do I know that I am getting closer to my Objective?

1st Key Result: The key result that is obvious is the 15 pages written. 2nd Key Result: Nima has developed a complete workflow. This includes a reading routine, transferring notes to permanent notes, linking thoughts,....

\*\*Additional Information.

- Wikipedia article SMART Criteria<sup>31</sup> (English).
- MIT Sloan article With Goals, FAST Beats SMART<sup>32</sup> (English)
- Article OKR - Google's Wonder Weapon for Business Success or: Get Out of the Comfort Zone<sup>33</sup> (German)
- Ted Talk How We Can Make the World a Better Place by 2030<sup>34</sup> (English)
- Video How Google Sets Goals: OKRs with Google Ventures Partner Rick Klau<sup>35</sup> (English)
- Video OKR-Agile Goal Management for Medium-Sized Businesses<sup>36</sup> (german)
- Video OKR - Leading with Objectives and Key Results (OKRs) - how the Google Leadership System works<sup>37</sup> (german)
- Book Introduction To OKRs by Christina Wodtke<sup>38</sup> (english)
- Book The Beginner's Guide To OKR by Felipe Castro<sup>39</sup> (english)

### 3.3.1.2 exercises

<sup>31</sup>[https://en.wikipedia.org/wiki/SMART\\_criteria](https://en.wikipedia.org/wiki/SMART_criteria)

<sup>32</sup><https://sloanreview.mit.edu/article/with-goals-fast-beats-smart>

<sup>33</sup><https://t3n.de/news/okr-google-wunderwaffe-valley-ziele-530092/>

<sup>34</sup><https://www.youtube.com/watch?v=o08ykAqLOxk>

<sup>35</sup><https://www.youtube.com/watch?v=mJB83EZtAjc>

<sup>36</sup>[https://www.youtube.com/watch?v=\\_ugCKONbBNs](https://www.youtube.com/watch?v=_ugCKONbBNs)

<sup>37</sup><https://www.youtube.com/watch?v=y-alyqMZfnE&t=>

<sup>38</sup><https://www.oreilly.com/business/free/files/introduction-to-okrs.pdf>

<sup>39</sup><https://felipecastro.com/resource/The-Beginners-Guide-to-OKR.pdf>

**3.3.1.3 Reflection part** What is already going well? What have you already achieved? Who/what could support you? How would you know that you have fully achieved your goal?

#### 3.3.1.4 Learning goal

- You support your learning success by making your goals measurable.
- You motivate yourself and the other participants by making your goals tangible.



### An appointment with yourself

**3.3.1.5 Theory** Do you take enough time for your personal development and to work on your goals? Many people are busy with their daily tasks and don't care enough about their development and well-being. A good approach is to make an appointment with yourself and reserve this time in your calendar.

##### 3.3.1.5.1 More information:

- Video: 7 Big Rocks<sup>40</sup>
- Podcast: Never enough time? Schedule your priorities by colorcoding your calendars<sup>41</sup>

**3.3.1.6 exercises** Check your calendar and look for possible dates with yourself. An hour or even 30 minutes a week is a good starting point. Put an appointment with yourself on the calendar. If

<sup>40</sup><https://www.youtube.com/watch?v=fmV0gXpXwDU>

<sup>41</sup><http://www.asianefficiency.com/schedule-management/color-code-your-calendar/>

possible, make it a recurring appointment so that this time becomes a habit for you. Find at least five appointments:

1. ...
2. ...
3. ...
4. ...
5. ...

### 3.3.1.7 Reflection part

- Discuss your approaches in the Circle.
- Do you have the same time slot each week?
- Do you find it easier to dynamically schedule an hour each week?
- How do you usually schedule recurring appointments and do you feel comfortable with the method?

### 3.3.1.8 Learning Goal

- You make a commitment to yourself to give yourself this learning space for the exercises.
- You create the necessary conditions to carry out the Circle successfully.



## Week 2 - PKM Environment Setup

### 3.3.2 Theory

When it comes to organizing your personal knowledge management, choosing the right program can be helpful. A good program will give you the ability to store your notes in one place and ensure that you have access to the information you need at any time.

There are many different programs on the market that focus on different ways of working and personal preferences. It may be wise to take the time to look into different programs to find the one that best fits your needs.

It is important that your knowledge is stored in a format that considers future viability. However, it is important to remember that programs can change over time and it may be necessary to choose a different program.

It is important to note that your choice of program is not set in stone and you have the ability to change your decision at any time. To help you with your decision, we have created a questionnaire to give you a start. However, it is important to note that this is only a guide and it is not the only option.

There are also programs like OneNote and Evernote that may not be for everyone, depending on what features and requirements you have. It's important to review the different options and choose the program that best fits your needs.

**3.3.2.1 Questionnaire to choose a program** You can use the questionnaire to support your choice for a tool:

1. what kind of data do you want to store and organize (e.g. texts, images, audio files)?
  1. i want to store and organize mainly text files. (A)
  2. i want to store and organize mainly text files and images. (B)
  3. i want to store and organize mainly text files, images and audio files. (C)
2. Which features do you need (e.g. branch structure, version history, markdown support)?
  1. i need branch structure and version history. (A)
  2. i need branch structure, version history and markdown support. (B)
  3. i need a branch structure, version history, markdown support and the ability to view multiple branches at once. (C)
3. How important is the ability to access your data from anywhere?
  1. It is very important to me to be able to access my data from anywhere. (A)
  2. it is important to me to be able to access my data from anywhere, but it is not the most important feature for me. (B)

3. It is not that important to me to be able to access my data from anywhere. (C)
4. How important is the ability to collaborate with others to you?
  1. it is very important to me to be able to collaborate with other people. (B)
  2. it is important to me to be able to collaborate with other people, but it is not the most important feature for me. (A, C)
  3. it is not so important for me to be able to cooperate with other people. (A, B, C)
5. How important is the ability to export and backup your data to you?
  1. it is very important to me to be able to export and backup my data. (A, B, C)
  2. it is important to me to be able to export and backup my data, but it is not the most important feature for me. (A, B, C)
  3. it is not so important for me to be able to export and save my data. (A, B, C)
6. How important is the customizability and extensibility of the software to you?
  1. it is very important to me that the software is customizable and extensible. (B,C)
  2. it is important to me that the software is customizable and extensible, but it is not the most important feature for me. (A)
  3. it is not so important to me that the software is customizable and extensible. (A, B)
7. What platforms does the software support (e.g., Windows, Mac, Linux, iOS, Android)?
  1. I need the software on Windows and Mac. (A, B, C)
  2. i need the software on Windows, Mac and Linux. (A, B, C)
  3. i need the software on Windows, Mac, Linux, iOS and Android. (A, B, C)
8. what pricing and subscription models does the software offer?
  1. I am willing to pay for the software and agree to a subscription model. (A, B, C)
  2. I am willing to pay for the software, but I prefer a one-time purchase model. (A, B, C)
  3. I am not willing to pay for the software and am looking for a free alternative. (A, B, C)
9. what kind of visualizations and diagrams do you need?
  1. I need the ability to visualize my data in mind-map form and graph-based charts. (A)
  2. i need the ability to present my data in mind-map form, graph-based diagrams, and other types of diagrams and visualizations. (B)
  3. I do not need special features for visualization and diagrams. (C)

Count the letters together. Depending on which letter you have the most choices, A: Roam, B: Obsidian, C: Logseq could be the most suitable for you.

This questionnaire is only a help and there is no guarantee that one of the above tools is the best for you. It is recommended to test the tools yourself to make sure it meets your requirements. (And they are not the only tools, they are only common tools)

If it is not possible for you to use a program optimized for knowledge management, e.g. due to restrictions of company IT policies, you can also start with OneNote. In the appendix (Guide to implement PKM with OneNote) you will find some notes. Also how to switch from a proprietary format to Mark-Down.

### 3.3.2.1.1 Links to common PKM programs

- Obsidian<sup>42</sup>
- Logseq<sup>43</sup>
- Roam<sup>44</sup>

If Markdown is foreign to you, and you want to use it in your Zettelkasten, check out the attachment. There is a crash course there. (In principle three characters are enough to use it)

### 3.3.3 Exercises

- Choose a program, either with the help of the questionnaire or otherwise
- Install your chosen program
- Familiarize yourself with the program
- Create a note
  - Title: Hello world
  - Text: My first note

### 3.3.4 Reflection section

1. what aspects are most important to you when choosing a program for personal knowledge management?
2. what kinds of notes do you take most often and what features would you need in a program to organize them?
3. how do you deal with the possibility that programs will change and possibly disappear from the market?

---

<sup>42</sup><http://obsidian.md>

<sup>43</sup><https://logseq.com/>

<sup>44</sup><https://roamresearch.com>

### 3.3.5 Learning Objective

- You have installed and set up your Zettelkasten environment
- You have become aware of what is important to you for your box work.



**Abbildung 11:** Notizen kennenlernen

## 3.4 Week 3 - Get to know notes

### 3.4.1 Theory

**3.4.1.1 Types of notes** It is not mandatory to use the terms, and the types can overlap and blend into each other. Just think of it as helpful background knowledge to guide you, and keep an open mind and flexibility in the application itself. The notebox is a living system and so it adapts to you.

**3.4.1.1.1 cursory notes** When you read a text and underline, mark up, write a few notes in the margin, or even write down notes while listening to it, these are ephemeral notes. Fleeting because usually after a few hours, after a few days you can no longer quite grasp the meaning of your underlining, key points or have completely forgotten. Maybe you have experienced this in school when you wanted to prepare for a class assignment and went through your notes ;-)

**3.4.1.1.2 Literature Notes** The literature note, or bibliographic note, is the reference to the source of the information. The purpose of the bibliographic note is to record the source of the information.

Depending on what you expect of yourself, you may want to include more or less information. If you are working scientifically, you will need to include more information, as there are usually general guidelines for this, which we will not go into here. Apart from that, you should always note down the following information - author - Book title/Internet link - date of publication

**3.4.1.1.3 Permanent notes** Your thoughts about the information are in the Permanent Notes. Every note you put in your notebox is meant to stay in your notebox forever. Hence permanent. It is irrelevant if you keep rewriting the note with the newest information or if you create new notes with new information and link them.

**3.4.1.1.4 Map of Contents / Index** Map of Content or Index notes are entry points on a higher level. Later we will come to how such notes are created. Here it is only about the fact that you already know that such a thing exists. When you have a lot of notes in your system, you will need a method to find your thoughts when you need them. And that's where these Map Of Contents help. By the way, there can be several levels of them, depending on how extensive your thoughts on a topic are.

**3.4.1.2 Structure - DNA of a note** A structure for notes? Since it is not enough to simply record the thought, but it needs to be coherently "taken in hand" in order to creatively stand in (d)context, there is a structure for this. The thought itself is certainly the most important thing in the whole, ultimately it comes from a context and is thought in a new one. Directly following this is the retrievability of the thought. On the one hand you have to grasp it quickly and on the other hand this only happens if you follow the always same structure of the note. This way your brain has accordingly the capacities it needs free to actually grasp the information dynamically. The recognition effect that is in the DNA of your note can actually serve you well....

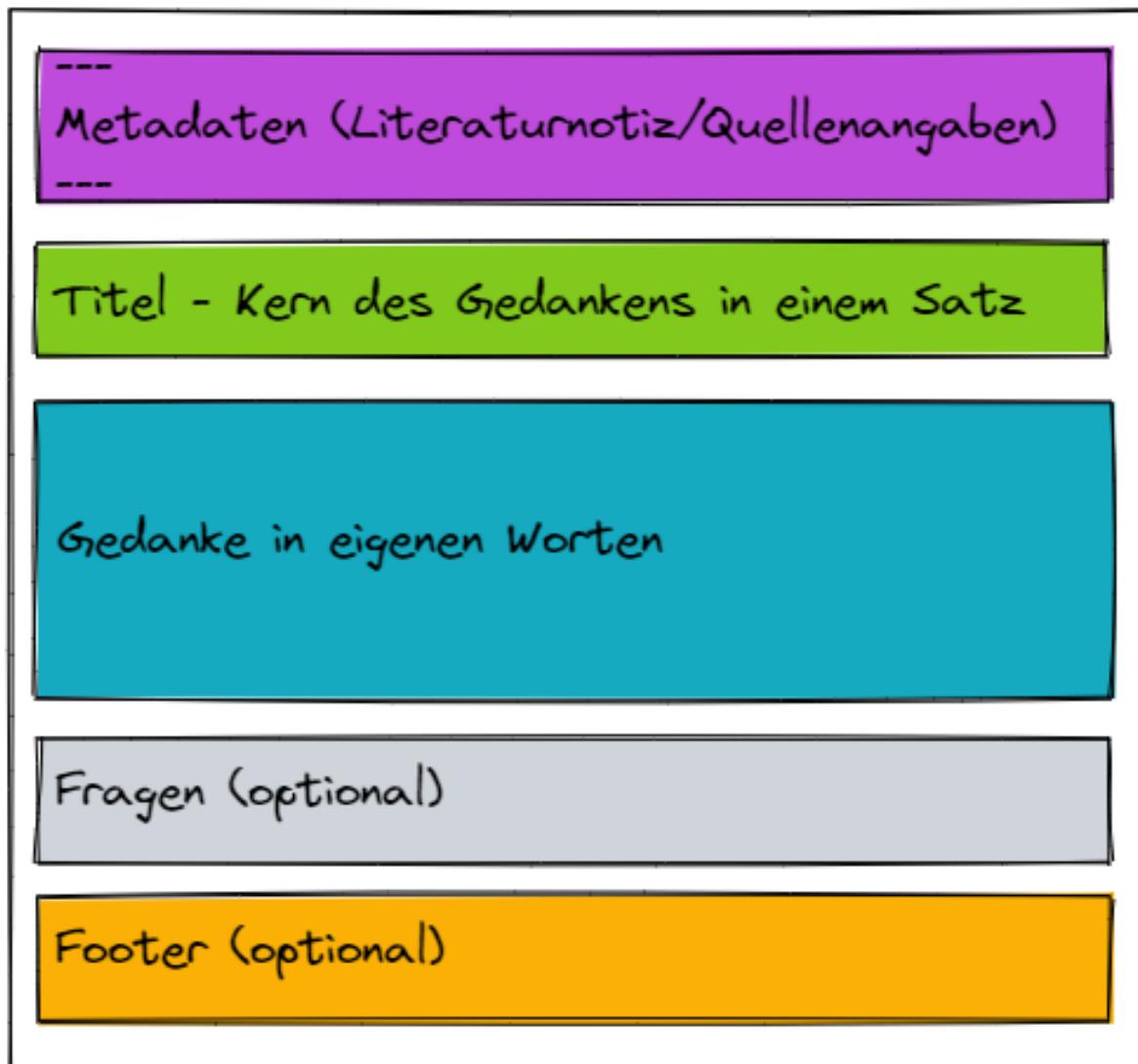
You can use your own structure. Maybe you already have one you feel comfortable with and want to keep using it. That's perfectly fine. You can also create one according to your own ideas. The important thing is that you stay consistent with it. Changes over time are natural with increasing knowledge. But you should not reinvent your structure every week or even every note ;-)

Here is a suggestion for a structure

**3.4.1.2.1 Metadata** Here you can enter information like author, source, date, tags and alias. With most PKM programs this information can also be searched and displayed selectively. Thus, the information of the literature note can also be embedded in the metadata.

**3.4.1.2.2 Title** Each note needs also a title with which it can be identified unambiguously.

Dateiname = Titel



**Abbildung 12:** DNA of a note

**3.4.1.2.3 Thought** Here is the actual note. The thought you have. Knowledge, thoughts, conclusions, what you have in your head.

**3.4.1.2.4 Questions** If you ask yourself questions about the thought, you can put them in an extra questions section. This way you can always find your unanswered questions immediately.

**3.4.1.2.5 Footer** In the footer could be links to other relevant notes that are not in the text, but still have a relevance to the topic. The source, the literature noitz, could also be placed here.

**3.4.1.3 Note in your own words** If you can reproduce a thought in your own words, then you have understood the thought. In essence, you can check whether you have acquired the knowledge or not. If you express the thought in your own words and can't find the right words for it, you realize that you didn't understand it after all or maybe you need to practice to improve your performance. If you can express it in your own words, you will already use your own linguistic (or visual) meta-model. All this will most likely guarantee that in a few years you will still be able to express the idea and that it will be understood. This topic will be discussed again in detail in the kata *Creating durable notes*.



Autor/in: PicoStudio

**3.4.1.4 Progressive Summarization** Progressive Summarization is a technique to summarize a text in iterative steps and reduce it to the essentials. Ideally, 10% text remains after each iteration.

Step 1: the complete text excerpt from a source Step 2: underline or mark in bold the most important statements/sentences of the text Stage 3: From the underlined/bold marked the most important keywords highlighted that are important for the statement. Level 4: A summary in your own words Stage 5: Bounding

In this process, the original text remains available at all times. If a higher level is not understood, the level below can be read. The method acts much like a safety net. Also, the method can still be used well when not so much energy is available. The method is a method, it does not have to be used. You can also record what you have read, heard or seen directly as audio, thereby increasing your social presence within a learning group, or reproduce it in your own words in a timely manner.

### 3.4.2 Exercises

- Write down your questions about what you have written above
- Discuss your understanding on notes and clarify the questions everyone has

### 3.4.3 Reflection part

- Do you feel picked up or unsettled with the information above?

### 3.4.4 Learning Objective

- What a note should include at a minimum
- What is optionally helpful in a note
- Self-check if the knowledge was understood
- Identify essential statements from texts
- Different types of notes and their meaning

## 3.5 Week 4 - Create first notes

### 3.5.1 Theory

Successful personal knowledge management in the notebook requires regular work. By taking time to regularly create and process notes, you can continuously increase your knowledge. Often it is enough to create a few, but regular notes. Every note, every linking of notes, and the thoughts that arise from them contribute to the increase of your knowledge. It is important to understand that knowledge management is a marathon and not a sprint, so you should also take time to take small steps.

To make note-taking easier and more energy-efficient, it's helpful to establish routines. You can do this, for example, by setting specific days or times when you create and process notes.

Fleeting notes, such as those created during a meeting or lecture, should be processed as quickly as possible to help you remember them later. The shorter the interval between the creation of the note and its processing, the better you can remember it later.



**Abbildung 13:** Flüchtige Notizen

To create your first note in the note box, you can use the information from Week 3 (Getting to Know Notes). The topic of your first note is not that important, it should just be something that interests you but is not so important that it paralyzes you. It's perfectly fine to create multiple notes and link them - try it out and see how it works for you.

**3.5.1.1 Tip** If you're unsure about what information to include in your Zettelkasten, you can check the information against the following criteria: - the information speaks to me - the information makes me think - I need the information for a topic I am working on. If necessary, look again at week 3 - *Getting to Know Notes*.

**3.5.1.2 Tip 2** To create links in Mark-Down just put [[ ]] around the note name and it becomes a link.



**Abbildung 14:** Create links

### 3.5.2 Exercises

- Create note(s)
  - Read an article/book/topic that you are currently interested in and create note(s) from it.
- Optional: set a rule date that goes beyond the sprint to process your cursory notes at a set time.
  - In addition to the sprint deadline, you can create another deadline for your Zettelkasten.

### 3.5.3 Reflection part

- In the circle, discuss the experience and the outcome (not the content of the note)
- What interested you most in reading the article/book/topic and why?
- From the material you read, what information/thoughts did you think were important enough to record in a note?
- What were the challenges in creating the note(s) and how did you overcome them?
- How did you process your cursory notes and how did it help you remember them?
- How did setting regular appointments for processing notes help you? What were the benefits and challenges of doing this?
- What insights did you gain about your habits, functioning, and learning needs after doing this task?

### 3.5.4 Learning Objective

- You can create a note in your notebook that will still be understandable to you 10 years from now.
- You are now committed to meeting your rule deadlines.
- You regularly file notes in your note box.

## 3.6 Week 5 - Create permanent notes

### 3.6.1 Theory

Creating notes requires some thought in order to effectively manage personal knowledge. An important foundation here is the atomicity of notes.

Atomicity means that each note refers to exactly one idea. This idea should be elementary and to the point, without prose or unnecessary details. Because of the atomic structure of notes, large ideas or



**Abbildung 15:** Länge der Notiz

abstract considerations can be created from many small building blocks, or thought processes can be connected.

An important component of a note is the title. This should be unique and designed to be as eloquent as possible. In this way, it is already possible to recognize from the title what the note is about and whether it can be useful for the current project. It is recommended to limit the length of the title to ~20 words<sup>45</sup>.

Regarding the length of the note, the text should be kept short to be able to capture the thought quickly. As a guideline, you can use 450 words or a DINA 6 page.

In summary, creating notebook-style notes effectively requires:

- Atomicity: each note should relate to one elementary idea, without prose or unnecessary details.
- Unique, speaking title: the title should get to the heart of the note's idea and be limited to 20 words if possible.
- Short text length: the text should be kept short in order to capture the idea quickly, guideline is 450 words or one DINA 6 page.

### 3.6.2 Exercises

- Find a piece of paper that does not fit into the criteria. The criteria are

<sup>45</sup>256 characters including file path

- Only one idea on the note?
  - Does the note fit on a DINA6 page (~450 words)?
  - the title reflects the basic idea
- Rewrite the note so that the criteria are met.
    - divide it into several notes if necessary, one idea per note
    - Delete unnecessary text (prose)
    - Make the title short, concise and meaningful so that it directly reflects the idea.
      - \* Ideally, it can be used as a sentence directly in a text.

### 3.6.3 Reflection section

What is the benefit of talking titles? - How can you make sure that a note actually refers to a single idea? - How can you make the title of a note as meaningful as possible and give a quick overview of the note's content? - How can one ensure that the length of a note is appropriate and allows the idea to be captured quickly? - To what extent does it help knowledge management to organize notes into atomic units? - How do you proceed when you come across a note that does not adhere to the criteria? What steps are necessary to adjust it? - To what extent is it beneficial to build the titles of notes as a sentence and how can you implement this?

### 3.6.4 Learning objective

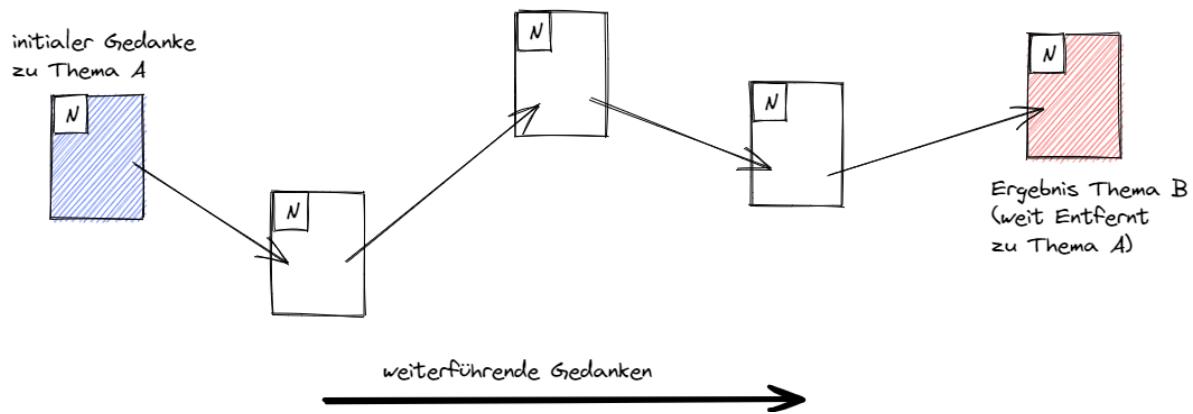
- Reduce a note to a single idea.
- Keep notes short and essential to be able to recall knowledge quickly.



## Woche 6 - Frittering

### 3.6.5 Theory

We start at one thought and move sequentially from there to the next thought. In the end, we have come from one starting point to a completely different point by chaining.

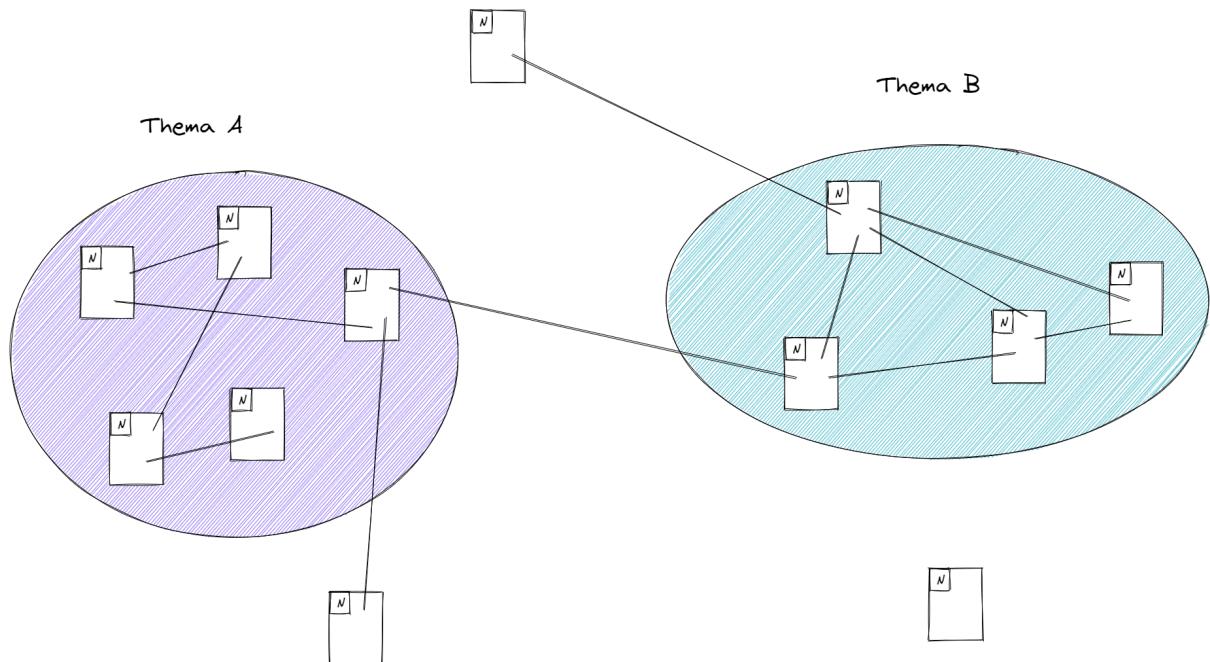


**Abbildung 16:** Model of the thought chain with notes

The same thing happens now with linking notes. A thought starts in a note, which leads to another thought (note), and on and on. This is a fundamental aspect of dovetailing, connecting information that has to do with each other.

From this connecting of information, clusters of topics emerge. This is what is meant by bottom-up in

this context. Areas/topics are not defined in advance, but the topics are formed by the accumulation of knowledge and networking with each other to form topic areas.



**Abbildung 17:** Emergence of bottom-up topic clusters

Thus, not only topic clusters but also natural entry points for topics are created by the divergence. Connections grow between topics that were not known before. This can lead to new ideas or even completely new approaches: something new emerges. In this way, your knowledge connects in your own notebook just as it is laid out in the neuronal structure of your brain, and in the process it sinks in deeper and deeper.

A piece of information is best found when there are many links on it. This is predetermined by the brain's system. You use this when you create your note. Therefore, linking relevant information increases the findability and memorability of the information. Note-taking is also important for this. It keeps the information in the Zettelkasten together and makes it accessible so that you can think and work with it on a deeper level (your long-term memory).

The more notes you have in your box, the more important and clear it becomes. Even if you only have a few notes in your Zettelkasten, it's worth starting now so that it grows. This way you will save knowledge and deepen it at the same time.

### 3.6.6 Exercises

In the last kata, you already made notes more atomic, so now you can capture the idea of the note more quickly.

Go through the notes in your Zettelkasten and if you notice that two ideas belong together, can look out for each other, or are otherwise connected, link them together.

If questions come to mind as you read the note, look for answers in your Zettelkasten and link them if you find notes that match.

Break down other notes into smaller components (keyword atomicity, from week 6), linking them as you go, as soon as you get the impression that they should be related.

You can also create direct links to other notes that you know are related when adding permanent notes.

You can put the link in the Footer<sup>46</sup> area, or you can link inline<sup>47</sup>.

And keep in mind, a link is not only to the same topics, but can also be a completely new link, just the one you see. You could also create a new note explaining for yourself why you see a connection between the

**Looking at the surrounding situation of a problem can bring greater insight for the solution**

Looking at the surrounding situation of a problem can bring greater insight to the solution. If the problem itself is removed from consideration, the impact remains. However, the focus of the observation can wander more freely and thus discover more.

Umgebung  
Problem  
des Problems

Umgang zeigt ebenso das Problem oder mehr

**Why it is with each other has to do**

**IF an image, thus t**

**there is the negative space with pictures as well as with problems, the consideration is quite similar**

Contours of the negative space trace the contours as well as the object itself. Like a piece of a puzzle. This is especially true in painting. Also with problems. The effect is the same. In both cases, looking at the negative space helps to see the situation more openly, and therefore more.

Sources:

Relevant:

- there is the negative space with pictures as well as with problems, the consideration is quite similar
- If an object is cut from an image, the shape remains and thus the object in the image.

Tags:

two notes. The following image illustrates this.

<sup>46</sup>The bottom area of a note

<sup>47</sup>Insert directly into the text or sentence

Note: If you are working a lot and intensively on a topic, it might make sense to set up an additional time per week where you only focus on linking ideas to each other. Tags like they exist in Obsidian can be helpful to link not yet linked notes.

### 3.6.7 Reflection section

- Would you do things differently the next time you get bogged down?
  - What do you like about what you've done so far?
  - What would you do differently next time?
  - What would help you do that?
- Are you satisfied with the result?

### 3.6.8 Learning goal

- You have received new associations and made connections
- You have formed new topic clusters

Autor/in: Maksim Kostenko

## 3.7 Week 7 - Pit stop

### 3.7.1 Theory

Congratulations, you have made it this far and have come a long way! You now have the most important foundations for your personal knowledge management, namely:

An important foundation is your PKM-environment. Here you will find all your information and notes. You have already learned about different types of notes:

- cursory notes,
- literature notes,
- permanent notes and
- the “map of contents”

Another important basis is the structure of a note. With a consistent structure, you can quickly orient yourself and better grasp and add information. A unique title, preferably a speaking title, and the thought succinctly to the point supports you in your knowledge work. Metadata helps you to find information.



**Abbildung 18:** Stopp

Another important concept is branching out. Link your thoughts and create natural entry points into topics. This creates connections between different topics and can lead to new ideas and approaches. By linking relevant information you increase findability and memorability.

Do you still have open questions? Are you still on track and have your learning goal clearly in mind or has your goal changed and should therefore be readjusted?

Outlook: - Finding information, - Create a “map of content” and think in a box of notes, - Establish a workflow so that you can expand and use your knowledge in the best possible way in the future.

### 3.7.2 Exercises

- Do your current goals still fit for you and how can you make sure you achieve them in the remaining 5 weeks?
  - If they no longer fit, change them so that they fit for you again (this is also possible).
- Write down the three basic questions you have regarding the notebook.
- Share your progress of your goals with your circle
- Discuss your questions with your circle

### 3.7.3 Reflection part

- Do you feel confident using your slip box?
- Do you feel comfortable with your goal and how you have achieved it so far?

### 3.7.4 Learning objective

- Check whether your own goal can be achieved
- Determine which questions are open with regard to the slip box

## 3.8 Week 8 - Knowledge retrieval

### 3.8.1 Theory

You have now already created some notes in your note box. But your notes are still easy to keep track of. However, if your note box continues to grow, it may start to become confusing. Therefore, it is now a question of how you can find your knowledge in your note box again, if it becomes more and more extensive. An important requirement of your system is the retrievability of information.



**Abbildung 19:** Wiederauffindbarkeit des Wissens

Retrievability means being able to find information you once stored later when you need it. This contrasts with information retrieval, where you know the information you are looking for is in a specific document and you have to search that document specifically. An important aspect of linking knowledge is the ability to link to notes that fit the topic. Of course, this is most easily done if you remember that you have that information in your Zettelkasten. Otherwise, we are already in the topic, how do you find information back in your note box?

Successful knowledge management should therefore originate bottom-up topic oriented and have indexes, or map of content notes, as entry points. This way, you can avoid getting lost in the flood of notes and instead search specifically for information that you had in your head but can no longer name precisely. Or even “stumbles” across information that you had “forgotten” was in the system.

Factors that influence the retrievability of information include the structure and organization of the notes, the use of keywords and tags, the possibility of full-text search, and the use of metadata.

One way to improve retrievability is to create indexes or a Map of Content (MOC). This defines major points of contact from which more detailed information can be accessed. Another option is the use of tags to quickly browse topic affiliations. However, the TAGs should be used rather sparingly, too many TAGs can lead to not seeing the forest for the trees. TAGs should also be maintained regularly to remain useful. A full-text search within the notes makes it possible to search specifically for certain terms. By using metadata, such as aliases, authors or book titles, notes can be filtered and sorted specifically. Another way to make notes retrievable is to link them to each other. This makes it easy to move from one topic to the next and keep the information thematically coherent. What emerges in the previous

exercise when you get bogged down. Train of thought.

### 3.8.2 Exercise

- Use keywords and tags: Try to add keywords and tags to the notes in your Zettelkasten to make it easier to identify topics.
- Create an overview of the keywords and tags you use in your Zettelkasten and think about how you can target them to improve information retrieval.
- Try out full-text search: Experiment with full-text search within your Zettelkasten to target specific terms.
- Experiment with how you might navigate along a thread to find information within the thread. Even if you know exactly where the information is, how would you navigate to it if you only knew it was *somewhere* in the thread?

### 3.8.3 Reflection section

- What methods and tools do I currently use to improve the retrievability of information in my Zettelkasten?
- What other ways of improving retrievability, could I use in my Zettelkasten?
- Analyze your box in terms of how do you find your information?
  - How long does it take you to find information?
  - What paths do you take?
- What thoughts do you have about the above information? Have you written them down?
- To what extent do you currently use linking notes to each other to make the knowledge in your Zettelkasten accessible?
- What are your current challenges with retrieving information in your Zettelkasten and how can you solve them?

### 3.8.4 Learning Objective

- Understand how different entry points can be used to find information.
- Know the entry points in your own note box.



## Week 9 - MOC in 3 stages

### 3.8.5 Theory

You may be wondering, what is a MOC and why do you need MOCs in your Zettelkasten? MOCs are entry points to larger subject areas. They are a map to your knowledge with which you can safely orient yourself within a topic area. They allow you to get a quick overview without having to read all the details again. If necessary, you can of course read deeper into the details. As I said, you can get an overview of a topic with a lot of notes by using a MOC and you can also elaborate it more. Think of a MOC as a room where all the notes on a topic can exist without you having to combine them directly in a meaningful way, but you could. You can just create a room in your Zettelkasten that contains all the notes on a topic and you don't have a compulsion to link them directly now in a logical and sequential way. They may all be in there.

Now you may ask yourself, when should you create a MOC? You should create a MOC when you have the feeling to lose the overview of a topic. Then it is really high time. An indication could also be if you keep looking for information, but can't find it directly.

1. get all notes about the topic into a new note
2. weigh the notes against each other, work out thoughts, divide, structure. This is where new insights emerge because you are intensely engaged with your thoughts. This process can take several days. You create an overview of the topic based on your notes.
3. Link the MOC in the system and ensure findability

Keep in mind that MOCs will continue to evolve, they are not static. As your knowledge grows the time

will come to update a MOC. The notes will be weighed against each other again. A MOC can in turn contain several MOCs and thus a whole hierarchy of MOCs on a topic can emerge.

Here again the most important points to MOCs - offers entry points to larger topics and helps to get an overview and to work out topics with many notes. - Should be created when there is a feeling of losing track of a topic. - MOCs can evolve - a MOC can contain several MOCs.

### 3.8.6 Exercises

- Choose a topic for which you want to create a MOC.
  - It makes sense to choose a topic for which you have several notes in your Zettelkasten.
- Gather all your notes on that topic into a new note.
- Go through all the notes and weigh them against each other. Revise them, reducing them to single ideas and removing unnecessary information.
- Create a subdividing structure from the remaining notes.
  - (optional) write an overview of the topic.
- Connect your new MOC to the rest of the note system by tagging it appropriately.
- Make sure the MOC is easy to find by choosing a meaningful title and adding relevant keywords.
- (Optional) Consider whether it is possible to further subdivide the topic and if so create appropriate sub-MOCs.

Hints: - The process can take a lot of time - It is not necessary to structure the notes hierarchically, experiment with different structures to find the best one for the topic. - It is recommended to practice creating a MOC regularly.

### 3.8.7 Reflection section

- How did creating the MOC impact my understanding of the topic and what insights did I gain through the process?
- What were the biggest challenges in collecting my notes on the topic?
- What type of structure did I choose for my MOC and why?
- What can I do to ensure that my MOC is easily findable?
- How often should I update my MOC and why?
- How can I improve the creation of MOCs in the future? What methods or tools would I like to try?

### 3.8.8 Learning Objective

You understand the process for creating a MOC and have put it into practice.



**Abbildung 20:** Denken im Zettelkasten

## 3.9 Week 10 - Thinking in a note box

### 3.9.1 Theory

The note box is not only a collection of read knowledge, it also stores the own thoughts about the read knowledge, about work results and generally own thoughts and ideas. With this fund of material, the slip box can serve as a conversation partner. It is asked questions and the note box provides answers, if it has any. New connections, insights and new questions arise from this. It is thought in the note box, or with the note box. The interesting aspect becomes that thinking becomes more objective, since all previous thoughts can lie on the table, can lie next to each other. It becomes possible to objectively draw comparisons between parallel and even contradictory thoughts. When a question arises, it is a good approach to search in the first instance in one's own note box, because there is already a high quality of thoughts and selections. When thinking in the note box, I try to answer my own questions that I have about a thought, further questions. One thing leads to another and a train of thought unfolds. Either until all answers are found or the interest in this train of thought is lost. This thinking in the note box is part of the magic of the note box, it expands and sharpens one's knowledge and in the process allows new insights to emerge.

By the way, if you find notes in your slip box that contradict each other, neither is removed. Instead, another note is created that deals with the contradiction, e.g. why it is a contradiction. Whether there are areas where sometimes one is *correct*, sometimes the other. A contradiction offers the possibility to learn and grow from it. Likewise it leads to the clearer demarcation of the statements. So it is anything but a problem.

**3.9.1.1 Tip on structure** The way of noting is open. It is recommended to use a mechanism how still open questions can be found. e.g. with a TAG #question. Likewise a fixed arrangement is helpful where in the notes open questions are to be able to recognize this fast. Here from the Kata [[Zettelkasten Lernpfad - Kata - Notizen kennenzulernen#Struktur - DNA einer Notiz]] is fallen back.

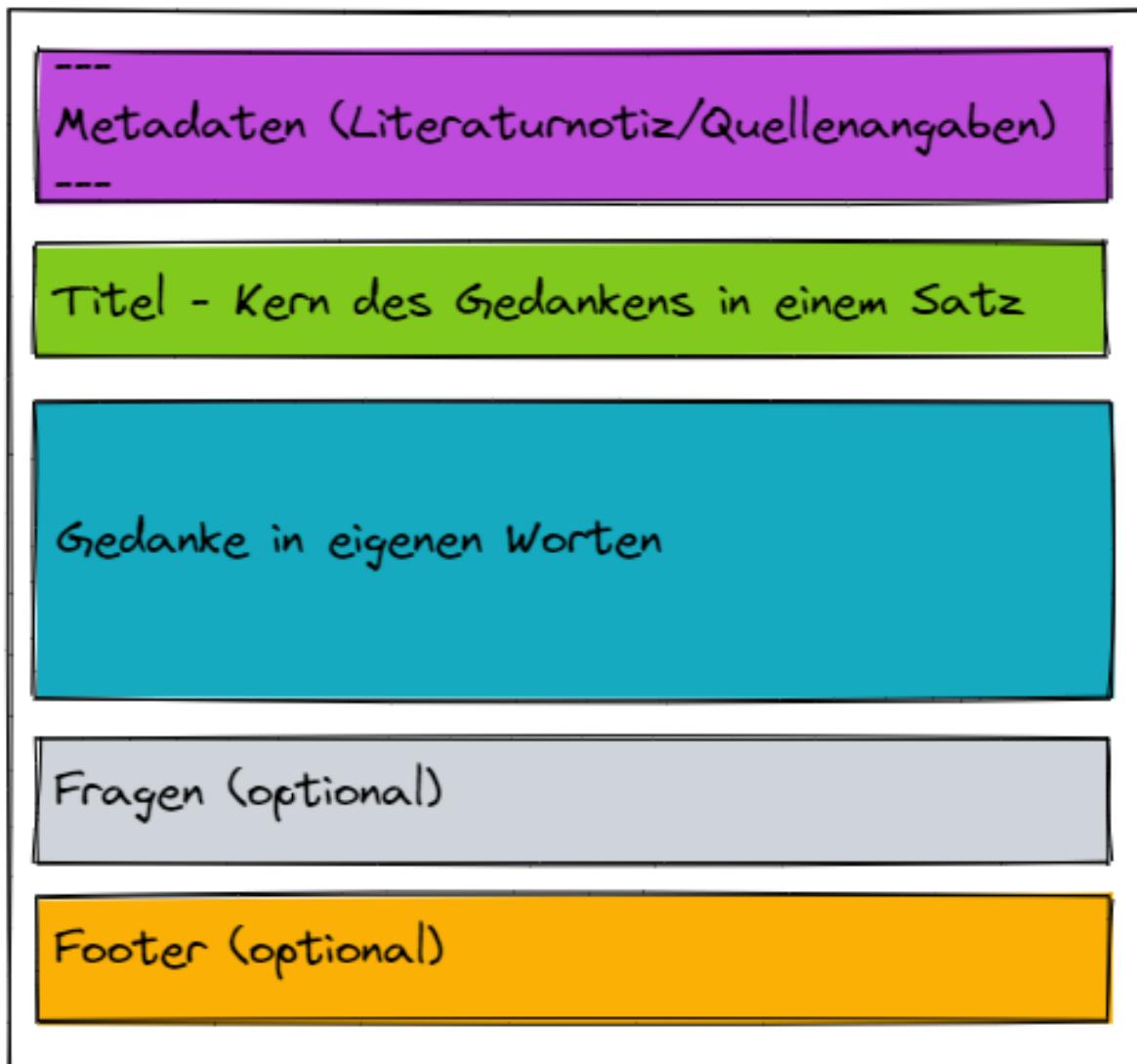
**3.9.1.2 Tip for asking questions - The Socratic Questions** If you can't think of questions right away, you can also use Socrates' questions for yourself:

1. clarifying your own thinking and explaining the origins of your ideas (Why do I think this? What exactly do I think?).
2. questioning assumptions (How do I know this is true? What if I think the opposite?)
3. looking for evidence (How can I prove this? What are the sources?)
4. considering alternative perspectives (What might others think? How do I know I'm right?)
5. examining consequences and implications (What if I am wrong? What are the consequences if I am wrong?)
6. questioning the original questions (Why did I think that? Was I right? What conclusions can I draw from the reasoning process?)

## 3.9.2 Exercises

- Going through your own notes and asking/noting questions
- Answer questions by
  - thinking about it/your own thoughts
  - going through your own notes
- Incorporating answers
  - create links between notes
  - If necessary, create new note as link between two notes

Dateiname = Titel



**Abbildung 21:** DNA of a note

### 3.9.3 Reflection part

- How did you feel about the dialogue with your note box?
- What are the advantages of thinking in a note box?
- How can you make objective comparisons between parallel and conflicting thoughts in the Zettelkasten?
- How can you use the slip box as a conversation partner?
- What kinds of questions can I ask the Zettelkasten?
- How can I check the logic and reasoning in my conclusions?

### 3.9.4 Learning Objective

- Use the note box as a conversation partner
- Conduct discussions with the notebook to gain knowledge



**Abbildung 22:** Workflow

## 3.10 Week 11 - Find your workflow

### 3.10.1 Theory

A workflow is of great benefit in staying on task and working more effectively. An established workflow helps to find a habit, use time more effectively, avoid distractions and focus on the task at hand. Habits

require less energy and allow you to constantly optimize your work process. A Zettelkasten workflow should include steps such as collecting notes, processing notes, writing permanent notes, creating Map Of Contents, and thinking in the Zettelkasten. When thinking in the Zettelkasten, you should ask questions, find answers, generate new ideas, work systematically with the Zettelkasten, and connect knowledge systematically. To establish a workflow, you should first define a goal, list the tools you use, and put the steps in order. The steps and tools should be connected and the workflow should be reviewed and adjusted regularly to keep it up to date. A workflow stays alive if it is executed, reviewed and adjusted on a regular basis. Regularity in execution and review is important to ensure it is still current and meets your needs. Adjustments should therefore be made regularly to keep it up to date.

### 3.10.2 Exercises

- Think about creating one big workflow or several smaller ones for different areas.
  - e.g. collecting notes; distract; thinking; writing texts
- define your goal, what the workflow should help you with
- write down which tools you use for working with your note box
  - note-taking environment
  - digital readers and utilities
  - list interfaces between tools
  - Books, ruler, markers, college block, etc.
- Create a rough flowchart that includes the steps you will take in the Zettelkasten process
- Add to the steps the tools you will need
- Check if you see potential for optimization in the flowchart
- Add details if they seem necessary to you

### 3.10.3 Reflection section

- Did you learn anything new while creating your workflow?
- What are the key benefits of an established workflow in relation to the notebook method?
- What are the most important factors in keeping a workflow alive?
- How can you ensure that your workflow is done by you on a regular basis?

### 3.10.4 Learning Objective

- Recognized that a good workflow is critical for lasting success.

- Understood that a notepad only comes into its own when it is continuously in use.
- You have your own workflow



**Abbildung 23:** Retrospective

### 3.11 Week 12 - Retrospective

#### 3.11.1 Theory

This week there is no clearly defined program with further exercises - now is the time to let the Sprint come to an end together.

Talk about the Circle and your experiences from the last weeks. Share what you learned and what the learning path did to you.

Wow, you did it and the Sprint is complete. Congratulations!

Where do you go from here?

Some Circles continue to meet regularly (e.g., every 2 bit 4 weeks). Topics from the learning path can be deepened again.

You may also have developed your own ideas in your Circle that you would like to work on in the future. Maybe you bring in ideas from your own fields of work, or you bring in ideas from other areas of interest. From these you create your own exercises. Discuss which activities you want to fill the weeks after the

sprint with, because it is important to stick with it and to further consolidate the skills and the positive habits you have built up during the sprint.

Define bindingly how you want to proceed more wisely (appointments, tools, personal meetings, etc.).

**3.11.1.1 Feedback** You have successfully completed our learning path to the Zettelkasten and we would like to thank you for your time and efforts. In order to continuously improve our learning path and ensure that it meets your expectations, we ask you to provide us with your opinions and suggestions by answering a feedback questionnaire. Your feedback is important to us and will help us to better tailor our learning path to the needs of our participants. Please take a few minutes to fill out the questionnaire. Your answers will remain anonymous and will only be used to improve the Lenrpfad. We thank you in advance for your support and look forward to hearing from you.

Your feedback on the slip box method: suggestions for improvement wanted!<sup>48</sup>

### 3.11.2 Exercises

- Talk about the Circle and your experiences from the last few weeks. What did you learn and what did the learning path do to you?
- Answer the survey

### 3.11.3 Reflection section

- Did you achieve your learning goal?
- Will you continue to fill and use the note box?

### 3.11.4 Learning goals

- Review of what you have achieved
- Outlook on how to continue

<sup>48</sup><https://www.surveymonkey.de/r/NQX55WN>

## 4 Appendix

### 4.1 What is Mark-Down?

Markdown is a markup language. This means that control characters are used in the text to indicate how the text should be displayed. So the control characters really go directly into the text. It could be compared to HTML<sup>49</sup> or LaTeX<sup>50</sup>. But don't worry, you don't have to program here, very few characters are enough and the programs then display the text without the control characters. To give you an idea of what this is all about, here is a practical example.

On the left is the text with the formatting characters. On the right is what you then see in the display.

|  |  |
|--|--|
| <h2># Überschrift</h2> <p>Das hier ist ein Beispiel. Und ein Link zu <a href="#">[[Beispiel 2]]</a>.</p> | <h2>Überschrift</h2> <p>Das hier ist ein Beispiel. Und ein Link zu <a href="#">Beispiel 2</a>.</p> |
|--|--|

The big advantage is that they are all text files (like the .txt extension you sometimes see on your computer). So they are readable on any system. The extension .md says only that syntax for interpretation is included in the format mark-down.

#### 4.1.1 Control characters

Already with two control characters the text can be brought into a structure and notes can be connected with each other.

- #, ##, ###, ...., For overwritings
  - # first hierarchical level
  - # second hierarchical level
  - ## third hierarchical level etc.
- [note-name]] to create links to other notes -> branching

That's basically all you need to get started.

Here are a few more control characters that are very handy, but not necessary. Just use the ones you feel comfortable with and which you think you need as formatting.

<sup>49</sup>Web pages are described with HTML

<sup>50</sup>A markup language used especially in science

- \*\*\*Bold formatted\*\*
- *Cursive formatted*
- ===Marker Marked==
- \# -> Creates a TAG, something like a sticker
- [Text](http Link) -> Creates a link to any address. E.g. [Google](http://www.google.de)
- [Note]] -> Displays the contents of a note.
- -- -> creates a separator line

Some programs also offer you buttons for this like in WYSIWYG programs<sup>51</sup> (e.g. Word is such a program).

#### 4.1.2 Advanced mark-down syntax

- Metadata --
- Tables ||
- Comments %
- Citations >
- References ^
- Block references with ^ and #
  - ^ for blocks -> [[example#^reference]]
  - # for headings -> [example#heading]]

There are more MD syntaxes. If you are interested in more possibilities you can look them up here (=look up address and insert==).

## 4.2 Change from proprietary format to Mark-Down

This is for you if you have not used mark-down before. There are many programs that use proprietary formats. Proprietary formats are formats created by a particular company or developer that can only be used with their products. An example of this would be the format of a note in the Evernote app that cannot be opened in other note apps.

Unfortunately, however, there are difficulties and risks associated with using proprietary formats. One of them is that you are trapped in a dependency on a particular company or developer, since you cannot change or export the format without using the corresponding product. Another risk is that the format may eventually be discontinued by the company or developer, which may mean that you can no longer open your notes. The accumulated knowledge is then lost.

<sup>51</sup>What you see, is what you get / What you see is what you get

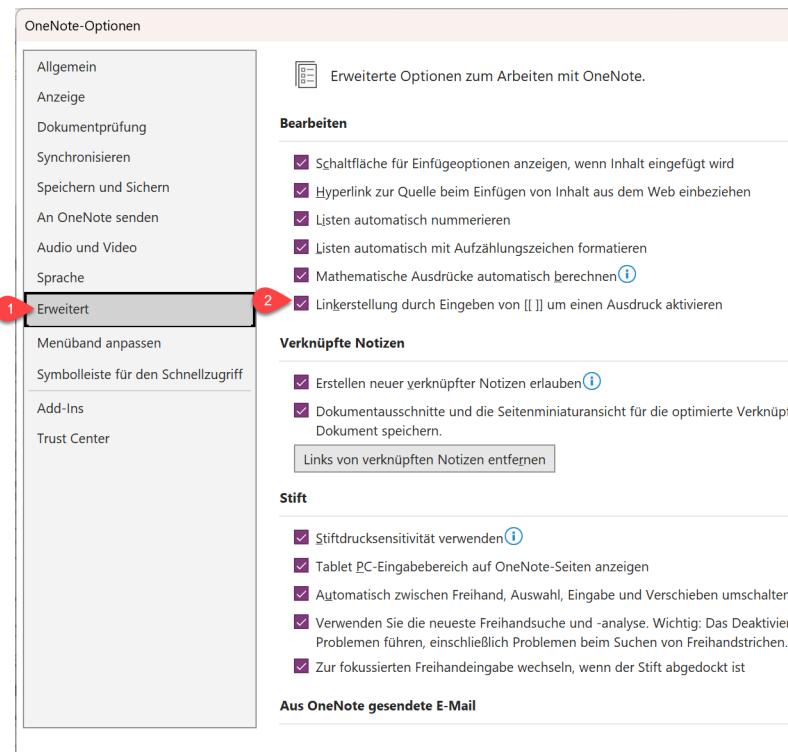
One solution to this could be to implement a switching strategy. One possibility would be to create all new notes from now on in an open format like Markdown, in a suitable program. If one then later searches for old notes, one can search for them in the old program and then transfer them to the new program. The advantage here would be that the transfer only happens when it is really necessary and the energy is distributed for it.

Another suggestion for a switch strategy could be to look for tools that can convert the proprietary format to an open format like Markdown. This way, you could export your old notes to a format that is supported by many different applications and you no longer have to feel dependent on a particular company or developer.

### 4.3 Guide to implement PKM with OneNote

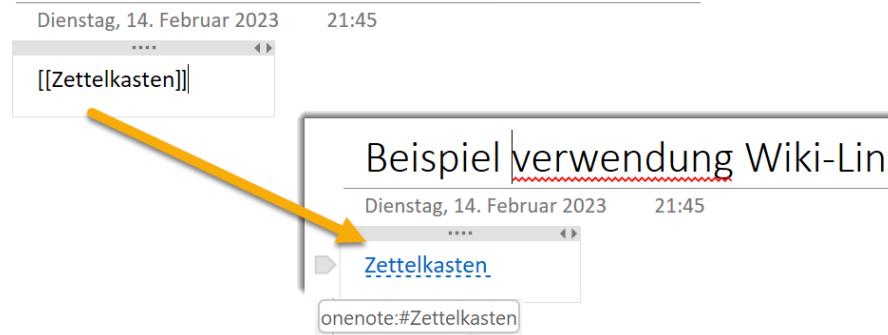
Guide to implement PKM with OneNote, if more suitable tools (e.g. those from week 2) are not available, e.g. due to restrictions from IT policies in a company.

- use [[PAGE NAME]] to directly create links



- enable the wiki link function in OneNote

## Beispiel verwendung Wiki-Links



- OneNote wiki link application
  - all notes into one notebook
  - tab "MOC" could be used to collect all MOCs
  - create a separate page for each idea to be able to link specifically
  - Use speaking titles for page titles

## 5 Acknowledgements

The guide was written by: Andreas Trebing<sup>52</sup>, Friederike Schoeller-Frey<sup>53</sup>, Martina Krobath<sup>54</sup>

Helped by:

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- Stephan Diepolder

### 5.1 Change history

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| Version | Edited by       | Description Change         | Date       |
|---------|-----------------|----------------------------|------------|
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