UltraLearning

# Metalearning

Mapping out the learning journey before you begin

* Why
* What
* How
* Bottlenecks

Should be done at the start of the project but repeated throughout the project. Should account for 5-10% of total time.

# Focus

Methods for overcoming procrastination and avoiding distraction. As well as mental arousal (alert or not)

The focus principle emphasizes the importance of concentrating on one thing at a time. To achieve this, you need to eliminate distractions, set clear goals, and establish a schedule that allows for uninterrupted learning. Examples of methods to achieve focus include time-blocking, minimizing or eliminating digital distractions, and creating a dedicated learning space.

Eliminating distractions is an important part of achieving focus and concentration in your learning. Here are some tips on how to eliminate distractions:

Create a dedicated learning space: Having a specific area that is dedicated to your learning can help you stay focused and reduce distractions. This could be a quiet room, a desk in a corner of your house, or a table in a coffee shop.

Turn off notifications: Notifications from your phone or computer can be major distractions. Consider turning off all non-essential notifications, or using an app or tool that helps you manage notifications.

* **Use a distraction-blocking app**: There are many apps available that can help you block

distractions while you work. These apps can block social media sites, email, and other distracting websites for a set period of time.

* **Set specific times for checking email and social media**: Rather than checking your email or social media throughout the day, set specific times when you will check these platforms. This will help you stay focused during other times of the day.

Use noise-cancelling headphones: If you work in a noisy environment, using noise-cancelling headphones can help you block out distractions and stay focused.

Avoid multitasking: Multitasking can be counterproductive and lead to distraction. Instead, focus on one task at a time and give it your full attention.

Remember, everyone's learning environment is different, so it's important to find the strategies that work best for you. By eliminating distractions, you can improve your focus and concentration, and achieve faster and more effective learning outcomes.

# Directness

Doing what is important, not what is comfortable should tailor the content to match the context in which you plan to use the skill. (AI -> Finance). The assessment for learning Spanish is can you speak Spanish, not your Duolingo level. Focus on the key important areas.

The directness principle encourages learners to seek out real-world experiences and learn through practical application. This approach involves designing your learning around the specific skills and knowledge you want to acquire, rather than just studying a broad topic. Methods to achieve directness include project-based learning, apprenticeships, and immersive experiences.

**Finance Specifics**

Investment management is a critical component of the finance industry, involving the management of assets such as stocks, bonds, and real estate to maximize returns for investors. AI can be used to help investment managers make more informed decisions and manage portfolios more effectively.

Here are some specific ways AI can be used in investment management:

* **Portfolio optimization**: AI can be used to analyze market data and other financial metrics to create optimized investment portfolios based on individual investors' goals, risk tolerance, and other factors. Machine learning algorithms can identify patterns in market data and recommend portfolios that are most likely to achieve the desired returns.
* **Risk management**: AI can be used to monitor financial markets in real-time and provide alerts when there are potential risks or market changes that could impact investments. For example, machine learning algorithms can analyze news articles, social media feeds, and other data sources to identify emerging risks and recommend strategies to manage them.
* **Asset allocation**: AI can be used to determine the optimal allocation of assets within a portfolio to maximize returns and minimize risk. This involves analyzing market trends, risk factors, and other financial metrics to determine the best mix of assets for a given portfolio.
* **Investment research**: AI can be used to analyze financial statements, company reports, and other data sources to provide investment research and recommendations. This can help investment managers identify potential investments that may be undervalued or have growth potential.
* **Trading**: AI can be used to execute trades automatically based on predefined rules or algorithms. This can help investment managers take advantage of market opportunities and reduce the risk of human error.

Overall, AI can help investment managers make more informed decisions, manage portfolios more effectively, and achieve better returns for their clients. As the technology continues to evolve, we can expect to see even more innovative applications of AI in investment management.

# Drill

Breaking big topics down into parts and identifying the parts you are worst at. (Removing bottlenecks). If you can’t speak to someone in a language? Why? Focus on those parts.

The drill principle involves practicing a skill or concept repeatedly in a structured and deliberate way. This helps to develop muscle memory and automaticity, which can speed up the learning process. Methods to achieve drill include deliberate practice, spaced repetition, and using mnemonics.

* **Deliberate practice**: Deliberate practice is a technique used to improve performance in a specific skill or activity. It involves breaking down complex skills into smaller components, and then focusing on practicing each component individually until it can be performed consistently and correctly. The process of deliberate practice involves setting specific goals, receiving feedback on performance, and adjusting the practice approach as necessary to continue improving.

Deliberate practice can be used to develop a wide range of skills, from playing a musical instrument to mastering a sport or learning a new language. The key to effective deliberate practice is to focus on the most important components of the skill and practice them consistently and deliberately over time.

* **Spaced repetition**: Spaced repetition is a technique used to improve long-term memory retention. It involves reviewing information at specific intervals, with each review spaced further apart in time. The idea is that by spacing out the reviews, the brain has time to consolidate the information and create stronger neural connections, leading to better long-term memory retention.

Spaced repetition is commonly used in language learning and other forms of memorization. For example, when learning vocabulary words in a foreign language, spaced repetition involves reviewing each word at specific intervals, with the interval increasing each time the word is reviewed. This helps to reinforce the memory of the word and improve long-term retention.

Spaced repetition can be combined with other learning techniques, such as flashcards or quizzes, to further reinforce the memory of the information being learned. Overall, spaced repetition is a powerful tool for improving long-term memory retention and can be used in combination with other learning techniques to accelerate the learning process.

Optimal Repetition Pattern:

* **First repetition**: 1 day
* **Second repetition**: 7 days
* **Third repetition**: 16 days
* **Fourth repetition**: 35 days

# Retrieval

Convention is to learn the material and then to test what you’ve learnt. But the test is what provides most of the learning.

* Writing out what you can remember from the chapter you just read
* Using flashcards
* Creating challenge questions while you read the chapter.

The retrieval principle involves actively recalling information from memory. This helps to strengthen neural connections and improve long-term memory. Methods to achieve retrieval include self-testing, quizzing, and summarizing.

# Feedback

Whenever you test yourself, you should receive feedback on your answers as soon as possible with the caveat you have to thoroughly answer the question first.

The feedback principle involves receiving constructive feedback on your performance. This helps you to identify areas where you need to improve and adjust your learning strategies accordingly. Methods to achieve feedback include working with a coach or mentor, using self-reflection, and using technology to track your progress.

# Retention

The different ways and reasons we forget. The retention principle involves designing your learning experience in a way that maximizes long-term memory retention. This involves understanding how memory works and applying strategies to optimize retention, such as spaced repetition, interleaving, and visualization techniques.

# Intuition

Intuition and pattern recognition as modes of solving problems vs memory. Feynman technique:

* Write down a concept a problem.
* Write out an explanation explaining it to someone else.
* If stuck, return to the book.

# Experimentation

As you become an expert in something, the resources available to understand that thing begin to diminish. As such you need to be creative, start experimenting to find your own path.

The experimentation principle involves taking risks and trying new things to accelerate your learning. This can involve exploring different learning methods, taking on new challenges, and stepping outside of your comfort zone. Methods to achieve experimentation include trial-and-error learning, learning by doing, and seeking out new experiences.

Reading and Retaining

# Subvocalization

When we have a voice in our heads as we read along.

Not supported by evidence.

# Read the Middle

Read in the middle of the page. You don’t really need to read the outer text it wastes peripheral vision.

# Use Your Pointer

Use a pointer to scan the the text.

# Gamification

# Writing Summaries