How to Revise My way, maybe not the best way, but my way.

ELI ATKINSON

Table of contents

Acknowledgements7
Figures7Internet Research8
What is this?
Scheduling
What is it?
A word on media 15
Essay subjects15Non-essay subjects16Honorable mentions and fan favourites16
Sciency-stuff
Theories 17 Yerkes-Dodson Law 17
Bloom's Taxonomy 19
Priming 21 The Forgetting Curve 23 Non Sleep Deep Post 24
Non-Sleep Deep Rest

Acknowledgements

Figures

Page – Figure – Author – Creation Date – Source (License) – Access site – Access Date

- **11. Fig 1.** Eli Atkinson. 2024-05-21. Created on Lucidchart (CCO). https://ibb.co/k5FxvJy
- 12. Fig 2. Eli Atkinson. 2024-05-21. Created on Lucidchart (CCO). https://ibb.co/kqB3Zy4
- **15. Fig 1.** Hebb. 2014-06-16. Wikimedia Commons (CC0). Wikipedia. 2024-05-20

https://commons.wikimedia.org/wiki/
File:HebbianYerkesDodson.svg

16. Fig 2. Corydave. 2021-04-10. Wikimedia Commons (CC0). Wikipedia. "

https://commons.wikimedia.org/wiki/
File:BloomsTaxonomy.png

```
16. Fig 3. Jonathunder. 2010-10-3. Wikimedia Commons (CC-BY-SA). W Commons. "
```

https://commons.wikimedia.org/wiki/
File:Honeycrisp.jpg

^{17.} Fig 4. Eli Atkinson. 2024-05-23. Created with Figma (CC0). https://ibb.co/sbvcG12

19. Fig 5. Icez. 2007. Wikimedia Commons (Public Domain). W Commons. 2024-05-23

https://commons.wikimedia.org/wiki/
File:ForgettingCurve.svg

Internet Research

I would like to mention **Jun Yuh** (**BSc**) on YouTube, @*jun_yuh*, for his wide selection of self-improvement content, and for introducing some of the theories, while also explaining how to apply them into your learning.

Additionally, I would like to thank the many contributers of Wikipedia.org and simple.wikipedia.org - the articles, figures, sources, and examples were very utile in the creation of this booklet.

Finally, I would like to thank Virtusan App and Prof Andrew Huberman Ph.D. of Stanford University, California, for producing and releasing for free on YouTube their advertisement free, unrestricted NSDR guided video.

What is this?

This book has been made to have all the information I have gathered on education, how to study effectively, methods, means, and how you can apply them to your learning. You may choose to implement some of these, you may choose to implement none of these. But, my hope is that you can find a way of revision and study that works better for you, and gets you where you deserve to be academically.

How to Revise © 2024 by Eli Atkinson is licensed under a

Creative Commons **Attribution-ShareAlike** 4.0 International license.

To view a copy of this license, visit

https://creativecommons.org/licenses/by-sa/4.0/

The afformentioned link is the official website's summary of what you are and aren't allowed to do with this work. To see the full legal code, see:

https://creativecommons.org/licenses/by-sa/4.0/
legalcode.txt

If you have any queries or concerns regarding any content in this book, please do not hesitate to reach out at:

Scheduling

What is it?

What I call 'scheduling' is the first step of my revision and study process, usually utilising a tool such as Google Calendar, alarms, another calendar, or even a piece of plain paper with what I want to study, and when, written on it. These schedules help you stay concentrated, provided a good self-discipline, and make the day feel more organised.

You don't worry about what you still need to do; it's all planned out and you know when you are going to tackle it.

How do I do it?

Firstly, choose your software or website to schedule in. For me, I'm going to be using Google Calendar.

BONUS - Set a separate calendar, called "School" or something like that, so that you can easily set it aside from other activities and events.

Now, choose a free date, or time period, such as a weekend, or a few free hours. Depending on how long you are going to be studying for, choose between 1, and 4 subjects (four subjects is a lot to do, and is best for all-day study, but is heavy). Place the subjects roughly down in the order that you would like to do them, I tend to start with subjects I struggle on most or enjoy least, and work upwards - this helps with motivation. Now you should have a rough pass on what you would like to study that day, but we're not done. Following through with what you have at the moment, say:

```
09:00-10:00. English Literature
10:00-11:00. Biology
11:00-12:00. Chemistry
13:00-14:00. Sociology
14:00-15:00. Further Mathematics
```

is what we call 'Blocked' learning, where you study the subjects in blocks, in this case: hourly blocks. This method is the most common, and works well for most people. Roughly, this would look like:



Figure 1. Blocked Learning

However, while blocked learning is traditional, tried, and true - it is not the only way and brings me nicely into one of the methods I use, **interleaving**.

Interleaving

Interleaving is the process of doing short sessions of a subject, say: Subject a, then switching to a completely different Subject, Subject b. This forces the brain to understand each content deeper as it builds understanding of the relationships between subjects and topics. Additionally, it keeps it varied, and a bit more fun.

If before, we did an hour of a, took a fifteen-minute rest, and did and hour of b, now, we would do an hour of a - b - c with twenty minutes on each. Using the timetable from before, this would produce a schedule that looked like:



Figure 2. Interleaved Learning

This can also be split down into topics per subject instead. For example, you would do the first 09:00-10:00 of English Literature but you would spend twenty minutes on Themes of a text, twenty minutes on Characters of a text, and twenty minutes on the text's context, for example.

Remember, though, interleaving can be hard to do, and can be less simple to implement, which is why some may use blocked practice, despite interleaving's benefits. Interleaving can also be hard on morale, as it is a long-term commitment, and doesn't yield best results in the short term, rather, showing its true benefits over longer terms of study. Especially when first trying interleaving, it can be frustrating, as you may want to get lost in one area of a theme - for example - or you may struggle with the switch between topics. So, to help with this: start small. In a typical blocked day, do one block that is interleaved, and interleave similar topics, rather than subjects. You may want to build up, like this:

- i. Interleaving Characters
- ii. Interleaving Character-Theme-Context
- iii. Interleaving Pieces of Literature
- iv. Interleaving Literature-Language
- v. Interleaving Subjects

This process should also help you find what "level" or "depth" of interleaving is best for your needs.

A word on media

This chapter will only be short, I can assure you of that, and will discuss the usage of different *mediums*, one of which being *media*, to contribute your learning.

As you will be aware, there are many different ways you can revise, I am hoping that in this chapter, I can summarise varying types - though not absolute - and say how they help and in what scenarios. It is always important to never limit yourself to methods just because they work for you, and to explore different techniques and means. Don't limit yourself to flashcards or mindmaps because they're what you know.

Essay subjects

For your essay subjects: English; Geography; History; et cetera, there are a variety of techniques that may suit your needs. For example:

- **Mind maps.** Sheets of paper with the main topic in the middle, with branches coming off into sub-topics and important statistics, quotes, and basic definitions. It is recommended to colour-code these, and/or utilise dual coding (icons) for key ideas.
- **Flashcards.** Whilst more limited than in non-essay subjects, these are very utile in remembering key facts, be they quotes, statistics, dates, definitions, and other small notes. Usually, the process of making the flashcards can be counted as revision, but it is vital to remember that it isn't "flashcard revision" unless you use them. Also prevents build up of piles of the same flashcards.

Practice essays. Practice writing paragraphs on topics, characters, etc. to build your vocabulary, structuring skills and clarity. Occasionally, you may wish to write more paragraphs, be that intro-PEEL-PEEL-conclusion for an 8 mark geography paper, or intro-PETAC-PETAC-PETAC-Conclusion for a 40 mark english paper. Isolate each part, rather than writing full essays, to "spot treat" and target your work.

Non-essay subjects

Sciences, mathematics, etc.

- **Mind maps.** Similar to above, but including equations, or other necessary information
- **Flashcards.** Useful here for memorisation of formulae, equations, and definitions
- **Past papers.** Similar to practicing paragraphs, your exam board (AQA, Edexcel, WJEC, CCEA, OCR) will upload prior years' past papers to their websites, including mark schemes, and sometimes, examiner's reports, giving tips and saying what they liked. These are useful for getting used to answering for a mark scheme, and how they work, so you can reflect that in your answers.

Honorable mentions and fan favourites

Use these to supplement learning

- **YouTube.** Creators such as *Cognito* or *FreeScienceLessons* excel in producing content for GCSE and sometimes A Level. Other notable mentions are *GCSE Maths Tutor* and *Thug Notes*. Feel free to watch other creators for alternative perspectives, but rely on trusted creators for definitive points.
- **Media.** For pieces of literature: you can read it, listen to an audiobook version, or watch videos of summaries and themes. Film adaptations can also be used.

Sciency-stuff

Theories

Yerkes-Dodson Law

The Yerkes-Dodson Law points out a relationship between *arousal* and *performance*.

Arousal refers to the psychological and physiological process of being "awake" and having your senses open to perception.

Following an experiment ran on a set of *m. m. molossinus* Japanese house mice, the two psychologists, Yerkes and Dodson, stated that for tasks involving "Simple Discrimination", that performance is positively correlated with mental arousal. However, for tasks involving "Difficult Discrimination", performance improves with mental arousal, but to a point, too much mental arousal hinders performance.

Their data, and findings were simplified into a comprehensible diagram by Hebb. It is important to remember that this is still a simplification, and not exclusive.

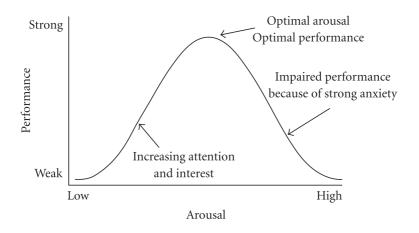


Figure 1. Hebbian version of the Yerkes-Dodson Law

To apply this to your learning, if your mind is not recieving enough stress, you should try and use more challenging content, this will help induce more stress; drive; improved performance.

Similarly, if you are overly-stressed, there are a myriad of techniques available to you to aid you in calming down. Examples of these are journalling, listening to music, meditation, yoga, or even just going outside for a few minutes – whatever you know works for you.

Bloom's Taxonomy

Bloom's Taxonomy is a hierarchy of learning, with each level representing a student's ability to grasp and manipulate information. Bloom's Taxonomy consists of three heirarchies relating to cognitive, affective, and psychomotor regions. However, the cognitive learning hierarchy is most applicable here as it is based on knowledge, not emotion or action. The levels are:

- **Knowledge.** Remembering facts, concepts, terms or answers without necessarily understanding what they are and what they mean.
- **Comprehension.** Demonstrating an understanding of the ideas by organising, summarising, translating, generalising, or giving descriptions.
- **Application.** Using the acquired knowledge to solve a problem in a new situation. Using prior knowledge to solve problems, identify connections, and how they apply in this new setting.
- **Analysis.** Examining information and breaking it into component parts. Determining relationships; motives; causes. Inferring from the data and finding evidence to support generalisations.
- **Synthesis.** Building a new meaning by putting together component parts of information. Creating a structure or pattern from diverse elements.
- **Evaluation.** Presenting opinions and defending them by judging: the information, the validity of ideas, or quality of work.

This is a lot, a lot of new words, and not the most straightforward definitions. So let's apply it to learning about something simple: Apples.

Knowledge. <u>Name</u> three common varieties of apples.

- **Comprehension.** <u>Summarise</u> identifying features of a Granny Smith apple.
- **Application.** <u>Would apples be useful</u> in the prevention of Scurvy, a disease caused by Vitamin C deficiency?
- **Analysis.** <u>Compare</u> four ways of including apples into food, and explain which one would have the highest health benefit.
- **Synthesis.** <u>Convert</u> an unhealthy apple pie recipe into a healthy one by replacing any ingredients you wish.
- **Evaluation.** <u>Why</u> are your chosen replacements <u>more healthy</u> than before?

EVALUATION
SYNTHESIS
ANALYSIS
APPLICATION
COMPREHENSION
KNOWLEDGE

Figure 2. Bloom's Taxonomy



Figure 3. Honeycrisp.jpg

Priming

Priming is a psychological concept that describes a relationship between seeing a stimulus, and how that effects understanding of a follow up stimulus.

The **priming effect** is the positive or negative effect of a rapidly presented stimulus (priming stimulus) on the processing of a second stimulus (target stimulus) that appears shortly after (According to Wikipedia).

So what does this mean, and how can I apply it to my learning?

In essence, we can apply this to learning by previewing the topics involved in an upcoming class or revision session, observing what they are, their basic components, and how they relate. This is our *priming stimulus*.

This helps us process and connect the content we learn in the lesson, our *target stimulus*. The effects of priming can help word recognition, semantic processing (how we first understand a term after hearing it), and our unconscious processing of information.

By previewing the topics, we can identify structures and correlations between relevant information, as well as understanding how concepts work together when solving problems and learning new information.

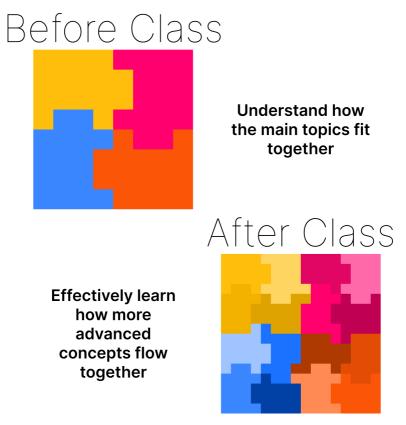


Figure 4. Application of Priming

Previewing topics can be done through flashcards, a short pre-test, a quick look through an exercise book, or anything else you find useful to remind yourself, even if its just saying outloud everything you can remember about it.

The Forgetting Curve

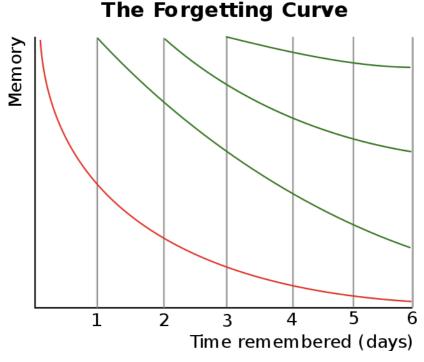


Figure 5. The Forgetting Curve

The infamous forgetting curve describes how over time, we forget. However, the more we revisit a subject or topic, the longer it takes for us to forget.

This applies to our learning a little like the common *"little and often"* eating mantra: by revising small amounts, but regularly, the information stays within our brains and is processed into long-term memory, rather than temporarily staying in short term stasis.

You may want to utilise tools such as flashcards, small quizes, or full past papers (infrequently) to keep your knowledge secured.

Non-Sleep Deep Rest

A selection of studies have shown benefits to taking naps, around 20 minutes, or completing NSDR Non Sleep Deep Rest meditation through a variety of online Yoga Nidra resources to keep your mind subconsciously awake, whilst resting.

By keeping your brain awake while resting, it subconsciously processes what you've just learnt after a revision session, deepens memory and understanding, strengthens mental connections.

If you find that you think your memory-of or understanding-of a subject is the same as before, then it's still very calming anyways.

An excellent example of an NSDR guided mediation is Dr Andrew Huberman (Neurology) of Stanford University, CA:

https://www.youtube.com/watch?v=AKGrmY80SHM

Virtusan App - "#NSDR (Non-Sleep Deep Rest) with Dr. Andrew Huberman" on YouTube, 2022-11-11.