A DIGITAL STUDENT'S GUIDE

STUDY TIPS FOR AN AGE OF DISTRACTION

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TECHNOLOGY: A PRESENT-DAY EDUCATIONAL CHALLENGE

As a high school student living in a world of distractions it can be hard to stay focused. The technologies that connect us are an essential part of our lives and yet they are designed to capture and hold our attention.

Information and computer literacy are a requirement in high school; However, the use of digital devices for learning and studying can be challenging when the same devices are used to stay connected to the online social and media platforms.

Are the digital devices interfering with the studying and learning, or is it the way we use such technologies the culprit?

Fortunately, research from cognitive and educational psychology offers some clues on how to best manage the distractions and provides a set of practical, easy-to-use learning tips that leverage the power of our digital devices for structuring our lives and reclaiming our focus.

THE DIGITAL STUDENT THREE-PART MANIFESTO

For effective studying in a post-millennial world, we address three major areas of concern, starting with (1) the foundational prerequisite of adequate sleep and how to maintain it, followed by (2) a review of evidence-based strategies on factors that influence optimal learning and finally (3) a closer look at the unique ways to harness the power of digital devices to eliminate online distractions and apply the research-based study techniques to make the best use of our time and our minds.

#1 - GET YOUR REST

By far the most important thing you can do to improve your overall health, physical and cognitive function is to get adequate sleep.[1] By getting 7-9 hours of uninterrupted sleep daily, you will pay closer attention, and your reaction time and the ability to manipulate information in your mind will improve.[2,3] Studying when you are sleep-deprived, on the other hand, impairs your judgment and you don't retain information the same way - it just won't stick.[4] For optimal sleep quality make sure to reduce intake of caffeinated foods and beverages by at least 6 hours before bedtime.[5]

#2 - STUDY TECHNIQUES

Environmental cues

The context in which you study impacts your ability to retrieve the information:[6] when preparing for an online test, try studying in the same room or setting that you will find yourself in when logging into the online exam, and if studying for an in-class test, you may benefit from studying in an empty classroom similar to the one on assessment day.

The state of mind and body matters

By matching your physical and mental state during the study phase with the time when you need to recall the studied material, you will remember more of it.[7] For example, if you tend to be more excited and energized during an exam, try and recreate that state when studying for it.

Spacing effect

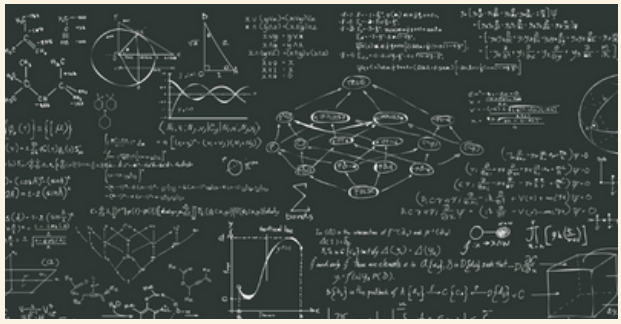
By spacing your study sessions progressively each time you revisit the material, the brain creates better associations to the studied material and you remember information more effectively, as the neural connections strengthen.[8,9,10] The section on digital tools discusses solutions that help you with the right amount of spacing between repetitions.

Active Recall

Avoid simply re-reading your notes, also known as passive recall, as it is not the best use of your time. By engaging with the material through either creating flashcards, summarizing or sketching without looking at your notes, you increase retention of the material;[11] It will be more difficult, but this is a sign that learning is occurring and will yield best results in the long run.

Take notes actively

Engage deliberately with the material when taking notes, using active note-taking strategies such as the Cornell method, the Outline method or by drawing concepts using the Illustrative method.[12, 13, 14, 15]



Interleave your science subjects

Avoid studying extensively in one course or topic. Interleaving your study sessions works best when studying subjects such as math, chemistry or physics, helping reinforce associations between concepts from different courses and facilitates greater understanding between these study areas.[16,17]

Multiple presentations for better retention

Expose yourself to more than one way to learning the information and you will recall the information more effectively.[18] By using a visual and a conceptual representation of the information, the concepts are better elaborated and reinforced. Try to engage actively with the material by illustrating or drawing a diagram of the learned concepts to reinforce your understanding.

#3 - DIGITAL TOOLS

An always-online reality has enabled the student to procrastinate more, enabling distraction and affecting academic performance.[19] The following digital tools emerged to meet the demand of the post-millennial generation as they grapple with the challenge of maintaining focus in a distracted world.

Pommodoro Technique to fight procrastination

A popular time and study management tool in the recent years has become the Pomodoro Technique,[20] touted as a favourite among students experiencing difficulty focusing. The most common use of the technique is to set a timer for 25 minutes of studying, with a 5 minute break marking a full Pomodoro cycle for a number of iterations.

The following are some Pomodoro apps available

Pomodor - https://pomodor.app/
- a simple web-based Pomodoro timer

Marinara Timer - https://www.marinaratimer.com/
- a web-based variation on the Pomodoro timer

Be Focused - https://xwavesoft.com/be-focused-pro-for-iphone-ipad-mac-os-x.html
- for Apple users, offering Pomodoro timer and time tracking

Alternately there are Youtube Channels such as the Zach Highley or Cajun Koi offering "study with me" pomodoro sessions that help with the timing

Apps to help with focus and block distractions

If you notice an inertia to scroll endlessly on your device and lose track of time, the following apps can help interrupt such habits

Freedom - https://freedom.to/
- blocks distracting apps and devices on all your devices at once

Cold Turkey Blocker - https://getcoldturkey.com/
- helps schedule system-wide blocking

LeechBlock NG - https://www.proginosko.com/leechblock/
- a browser-based website blocker of time-wasting websites

RescueTime - https://www.rescuetime.com/
- helps with time tracking and website blocking

Forest - https://forestapp.cc
- helps block distracting websites and tracks time

SelfControl - https://selfcontrolapp.com/
- helps block your own access to distracting websites

Focus - https://heyfocus.com/
- combines a Pomodoro timer and website blocker

PawBlock - https://www.pawblock.dannyguo.com/
- blocks distracting websites with cute animal pictures, and a gentle redirection towards your scheduled work ahead

Alternately, if you must use the social media apps to communicate, there are content blockers in the way of browser extensions (i.e. **Feedless** for IOS or **Newsfeed Eradicator** for Chrome)

Apps to help with studying and note-taking

There are a number of applications that help with studying and organizing knowledge, offering unique advantages over analog note-taking

YiNote - https://yinote.co/
- a browser extension that helps annotate youtube videos with timestamps in realtime

Workflowy - https://workflowy.com/
- a freemium tool, ideal for students who prefer taking notes using the outline method

Obsidian - https://obsidian.md/
- a free, yet comprehensive personal knowledge management system with note linking capability and graph view displaying networked notes

Roam Research - https://roamresearch.com/
- a paid, comprehensive personal knowledge management system with note linking capability

Notion - https://www.notion.so/
- a freemium comprehensive note taking and knowledge organization tool with scripting capabilities

Quizlet - https://quizlet.com/
- a freemium flashcard creation and study tool

Anki - https://apps.ankiweb.net/ - a free flashcard study tool integrated with spaced repetition and image occlusion features

Remnote - https://apps.ankiweb.net/ - a freemium, comprehensive personal management system integrated with a flashcard feature, spaced repetision, image occlusion, web clipper and pdf annotation

For the technically inclined

Obsidian - https://obsidian.md/ - is one of the most comprehensive tools from the previous list, with a vast amount of plugins that a super-user could leverage to create a powerful learning and study database that can be searchable and linked. Obsidian is also one of the most most future-proof, meaning it uses markdown format to store notes, is completely transparent and you own your information. The only feature missing from this free solution is the cross device synchronization. However, by hosting its vault file in a free Google Drive or a Dropbox account and then pointing the local Obsidian vault path to the synchronized folder, you get cross-device synchronization for free as well.

Notable - SuperUser - Obsidian YouTube channels

Linking Your Thinking with Nick Milo
https://www.youtube.com/@linkingyourthinking
Bryan Jenks Comprehensive Obsidian tutorials
https://www.youtube.com/@BryanJenksTech
Morgan on her use of Obsidian for Notetaking
https://www.youtube.com/watch?v=L9SLIxaEEXY

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