### Note Taking Tips, Examples and Ideas

#### Look through this booklet.

On this first page, and using the information and advice contained in this, summarise what you think are the most useful and most important ideas you found here on the space below:



# Why Using Pen And Paper, Not Laptops, Boosts Memory: Writing Notes Helps Recall Concepts, Ability To Understand

Feb 6, 2014 12:18 PM By Lizette Borreli @lizcelineb l.borreli@medicaldaily.com

Using pen and paper for note-taking helps boost memory and the ability to understand, more so than laptops. *Photo courtesy of <u>Shutterstock.com</u>*.

Note-taking using pen and paper has quickly become obsolete, at least in college classrooms. In the digital age, using laptops, or "notebooks," to transcribe lectures has become common practice, but can typing electronic, copious notes be harmful to academic performance? According to a recent <u>study</u> in a forthcoming issue of the

journal *Psychological Science*, using pen and paper, not laptops, to take notes boosts memory and the ability to retain and understand concepts.

In this world there are two types of people: those who insist on handwriting and those who insist on typing to take notes. Note-taking is a practical way to acquire and retain information while saving time and effort. However, with the advancement in modern technology, note-taking is changing, and for many, brings up the question over which medium to use to take notes.

Those who handwrite notes claim it provides flexibility and control, with the ability to include various formats and annotations often limited by word processing formats. Typing notes, however, eliminates the possibility of losing the notes and handouts while providing organization and clear legibility. As the trend of bringing laptops to class continually increases — with more than <u>50 percent of college students</u> reporting use in class at least once a week — researchers want to see if this positively or negatively affects cognitive processing, compared to handwriting notes.

To explore which medium is beneficial for note-taking, two psychological scientists, Pam Mueller of Princeton and Daniel Oppenheimer, a team of researchers at the University of California, Los Angeles, decided to test the effects handwriting or typing notes had on students' learning abilities in a series of two experiments.

In the first study, a cohort of college students were asked to listen to the same lectures and employ their usual notetaking strategy to transcribe important information. The participants were then tested on the material covered in the lecture half an hour later. Mueller and Oppenheimer were interested in observing the students' ability to recall facts and concepts, providing a deeper understanding of the topic.

The findings revealed while both groups memorized the same number of facts from the lectures, the laptop users performed far worse when they were tested on ideas. "The students using laptops were in fact more likely to take copious notes, which can be beneficial to learning," the <u>Association for Psychological Science</u>(APS) reported. "But they were also more likely to take verbatim notes, and this 'mindless transcription' appeared to cancel out the benefits."

The first experiment tested both groups of note-takers exactly half an hour after the lecture, which left them without the opportunity to review. The psychological scientists decided to explore this concept further and conducted a second experiment in which these students would be given a week to review for the exam. The participants would be tested on simple facts as well as concepts, inferences, and applications of the material.



Even after a week of review, the students who took notes in longhand were found to do significantly better than the other students in the experiment, including the fleet typists — those who transcribed the lectures. The researchers were surprised to find that even after some of the laptop users were explicitly told to not transcribe the lectures word-for-word, they still typed verbatim notes, which lead to a lower quality of learning. "Apparently there is something about typing that leads to mindless processing. And there is something about ink and paper that prompts students to go beyond merely hearing and recording new information..." according to the APS blog post.

The results of the two experiments suggest that taking notes with a pen and paper, rather than a laptop, leads to higher quality learning, as writing is a better strategy to store and internalize ideas in the long haul. Writing by hand strengthens the learning process, while typing can impair it. A similar <u>study</u> published in *Intech* found writing by hand allows the brain to receive feedback from a person's motor actions, and this specific feedback is different than those received when touching and typing on a keyboard. The movements involved when handwriting, "leave a motor memory in the sensorimotor part of the brain," which helps the person recognize letters and establish a connection between reading and writing. The researchers believe since writing by hand takes longer than typing on a keyboard, the temporal aspect may influence the learning process.

Overall, it seems those who type their notes may potentially be at risk for "mindless processing." The old fashioned note taking method of pen and paper boosts memory and the ability to understand concepts and facts. Perhaps pen and paper will become more prevalent in college classrooms again, as laptops may be given the boot when it comes to enhancing cognitive processes.

Sources:

Wray Herbert. Ink on Paper: Some Notes On Note Taking\*. *Association for Psychological Science*. 2014. Mangen A, Velay JL. Digitizing Literacy: Reflections on the Haptics of Writing. *Intech*. 2011.

#### From: http://www.gurl.com/2016/09/06/how-to-take-notes-in-class-inspiration-images-tips/

## **3 Scientific Links Between Handwriting Your Notes and Memory**

SUZY FRISCH AUGUST 3RD, 2016

#### https://redbooth.com/blog/handwriting-and-memory

At conferences, lectures, and meetings, it's common to see the people around you typing notes on their laptops, tablets, or phones. Maybe you're doing it too!

And why not? Typing is an incredibly efficient way to capture large amounts of information.

But if you're looking to actually master the material, typing notes is actually is not the best way to do that. Recent studies from psychologists and neuroscientists alike have found that handwriting is king for effective learning.

It has to do with how the brain processes different inputs of information. More specifically, it matters whether you transcribe a speaker's content digitally — or instead capture its essence on paper.



As digital continues to dominate, going old-school with handwriting just might work to your advantage. Writing by hand tends to boost your ability to retain information, comprehend new ideas, and be more productive — with the added bonus of eliminating the distractions of your device.

Read on to learn more about three scientific links between writing out your notes by hand and actually remembering the important stuff.

### 1. The pen is mightier than the keyboard

So say researchers Pam Mueller of Princeton University and Daniel Oppenheimer of UCLA, who recently published a paper with that title in <u>Psychological Science</u>. The three experiments they did led them to conclude that using laptops for notetaking might actually impair learning. Why? Because it often leads people to process information more shallowly.

In a nutshell, if you type your notes, you probably tend to record lectures verbatim. If you put pen to paper, you have to be more selective in recapping key components.

Paper notetakers' brains are working to digest, summarize, and capture the heart of the information. This, in turn, promotes understanding and retention.

Mueller and Oppenheimer found that participants who took notes on laptops performed worse on conceptual questions than those who took traditional paper notes.

"Laptop notetakers' tendency to transcribe lectures verbatim rather than processing information and reframing it in their own words is detrimental to learning," they wrote.

When you really need to grasp new material, consider dusting off your trusty pen and paper.

When you try to recall the information later, your brain will thank you for making its job easier.

### 2. Robust recall: Handwriting makes a difference

Some notetakers argue that they're more productive when they type because they can capture more material faster.

But without reviewing and studying those notes after an event, all of that extra transcribing doesn't do much good.

Psychology professors Dung Bui, Joel Myerson, and Sandra Hale at Washington University found that taking computer notes does offer the immediate benefit of better recall than wellorganized, handwritten notes. So the computer wins...at first.

But then their research, published in the <u>Journal of Educational Psychology</u>, uncovered something interesting: that advantage disappears in about 24 hours.



By that point, people who typed their notes actually performed worse on tests about the material.

The researchers concluded that the typing notetakers had worse recall because they weren't actively summarizing and synthesizing key points.

"Taking organized notes presumably involves deeper and more thorough processing of the lecture information, whereas transcribing requires only a shallow encoding of the information," they explained.

Next time to you need to recall information from a lecture or meeting for more than 24 hours, consider handwriting your notes. The material will stick with you longer.

### 3. Writing your way to a healthy brain

Some people prefer taking notes electronically because their handwriting has turned into illegible scrawl.

If that sounds like you, don't put away the pen and paper just yet!

There are brain health and developmental reasons to keep writing on paper.

Research from psychology professor Karin James of Indiana University evaluated children who hadn't yet learned to read or write.

Published in <u>Trends in Neuroscience and Education</u>, her study engaged children by asking them to reproduce a single letter by typing it, drawing it on plain paper, or tracing it over a dotted outline.

Then the researchers put the children in a functional MRI brain scanner and had them study the image again.

While reviewing the image, scans showed that kids who drew the letters activated three distinct areas of their brains.

Brains of children who traced or typed the letter didn't experience the same effect. The study demonstrates the learning benefits of physically writing letters, James notes, especially the gains that come from engaging the brain's motor pathways.

But that doesn't mean the perks of handwriting only apply to kids.

The more you use those neural pathways, the better it is for your overall brain health. The phrases "lifelong learning" and "use it or lose it" are never more true than with your brain. Both activities ward off debilitating disease like Alzheimer's and keep your cognitive abilities strong.

In other words, when you want to check out Facebook during a boring talk at a conference, go for it! That's a great reason to have your computer open.

But when you're trying to capture and retain complex material — or simply stay extra-sharp — put the laptop away...and take out a pen.









GET THE MOST DUT OF YOUR NEXT LECTURE BY LEARNING HOW TO TAKE NOTES RIGHT.









THERE'S NO CORRECT WAY TO TAKE NOTES - BUT HERE ARE SOME POPULAR METHODS TO TRY.







A DIVIDED NOTES PAGE SYSTEM DEVELOPED BY DR WALTER PAUK OF CORNELL UNIVERSITY













For large lecture halls, sit as close to the front as possible



Listen for cues to important points: repetition, changes in voice inflection from lecturer

Don't write down

everything and

always paraphrase

what you hear



Use shorthand, abbreviations and symbols





Review your notes within 24 hours

Identify any gaps in understanding, and consult your lecturer, classmates or textbook for help



Be prepared, stay focused and follow-up with revision. With good practice, you'll become a noteworthy student in no time.

#### Sources

Bone, D. 1988. Business of listening. Crisp Publications.
Cal Poly Student Academic Services. Note taking systems. sas.calpoly.edu Cornell University. The Cornell note-taking system. sc.cornell.edu
Mueller, P. and Oppenheimer, D. 2014. The pen is mightier than the keyboard: aof longhand over laptop note taking. Psychological Science. 25(6).
Pauk, W. 1974. How to study in college. Boston: Houghton Mifflin Co.
Perkins, K. and Wieman, C. 2005. The surprising impact of seat location on student performance. Phys. Teach. 43(30).
Sicinski, A. How to mind map guide: a beginners guide.blog.iqmatrix.com University of Winconsin Stout. The outlining method. uwstout.edu University of Manchester. Different models of note-taking. humanities. manchester.ac.uk



## CORNELL METHOD NOTETAKING IS SO EFFECTIVE OMG WHY WEREN'T WE TAUGHT THIS IN STUDY SKILLS by lavidapoliglota.tumblr.com

# **1. THIS IS THE NOTES COLUMN**

2. THIS IS THE RECALL COLUMN As soon as possible after lecture, review the notes column, take main ideas, key concepts, and important facts and write them in the recall column

~2 inches

During lectures, note <u>main</u> <u>ideas</u> and <u>concepts</u>. Don't mindlessly copy - rephrase what you can to retain information

Skip one line between ideas,

several between topics

Avoid writing in complete sentences, use symbols and abbreviations, e.g.:

Pelayo, a descendant of the Visigoth aristocracy, founded the Kingdom of Asturias in 718.

Pelayo (dscdt/Visigoth arist.) fd. Asturias 718

# 3. THIS IS THE SUMMARY SECTION

## Summarise main points here at the end

Info taken from http://www.heritagehawks.org/faculty/dbrown/HistoryClass/TheCornellMethod.htm



# Sketchnote Tips Carol Anne MeGuire

Shadows People Frames Connectors Bullets Lettering ·Prive lease to read) 888 High Low 0 SKINNY FAT  $\Box =$ ALL CAPS Small CAPS Q Kinder HELLO! N >2. >3. **小光 ○茶** FANCY HELLO 10 -= Fast 2 HELLO 3 NYXXXX 111/2 Reverse WOW = P 11111 BLOCK 3 ANGRY. NA 3D Scroll SLAND DASH -ELECTRONIC 3 Banner 6 some ways to annotate text: underline important ideas/themes ii. Circle words you don't iii. Restate claims + ask questions > write then down on the margins the text iv. In the end, think of the big picture and the claims the author making. is



Visual NoteTaking LETTERING ITLES UPPER CASE lower case identit are there patterns? and grow are there metaphors. - connect key points library aper or tablets work! Janung 15 learning i Sambrad or contrast pick just a few 2014









#### SYMBOLS & ABBREVIATIONS FOR NOTE TAKING

&	and	govt	government	
=	is, are I	mpt	important	
≈	about, approximately	ea	each	
>	more than	tho	though	
<	less than	thro	through	
#	number	probs	problems	
x	times	min	minimum, least	
<b>&gt;</b>	leads to, caused	max	max maximum, most	
Δ	change	btwn	n between	
1	or	bkgd	background	
	therefore	VS	versus, against	
1	increase, grow, gain	qty	quantity (amount)	
1	decrease, loss	hv	have	
Ŷ	female, woman, girl	N.B.	note well (important)	
ď	male, man, boy	e.g.	for example	
yrs	years	i.e.	that is	
@	at	cp (cf)	compare	
w/	with	ct	contrast	
w/o	without	B4	before	
w/i	within	р	after	
wrt	with respect to	q	every	
re:	regarding	ASAP	as soon as possible	
b/c	because	STAT	immediately	
s/t	something	f	frequently (often)	
s/o	someone			







11. Aside from making your words look cooler, you can also illustrate with little drawings – and you don't need to be an artist to do it right. Follow these tips:





# how i write Outlines/takenotes

ROMAN NUMERAL METHOD: (outline) required formot by I. Main Topic my bio A. Section Name (pg.#) teacher I usually

jut notes downin the margins

Important Facts, 2. concepts, 3. 4 examples, etc. 5. and so on ...

Highlight Key points/ definitions/ things the teacher ypes over

- B. Section Name (pg.#) 1. Important fact/concept/etc. a. Expansion/going into details 2. Important fact/concept/etd.
- b. } Expansion, details, c. } more examples, etc. II. Main Topic
  - and so on ....

#### MY USUAL OUTLINE METHOD:

[Section #] Section Name

-> summary from textbook

#### Heading

HAIN IDEA }

- info (important dates/ events/people/concepts/etc.)

SUBHEADING

- info
- event L+ effect
- the headings and subheadings in a different
  - info (Ex.) examples
- COLOP

I usually write

### EXAMPLE

- I. Energy and the Cell
  - A. Cellistransform energy as they perform WORK (pq.80)
    - 1. Energy is the capacity to cause shange or to perform work . The 2 types of energy are kinetic and potential.
- a. Kinetic energy is the energy of mation. Moving objects transfer motion to other matter. Head measured is a type of kinetic energy associated with the random
  - rement of outerns/etections.
- > b. Potential energy is energy that potential to is a result of its location or structure. Chemical energy is the potential energy available for release in a chemical reaction.

EXAMPLE

be Kinetic

energy

in temp

[Section 1] The Road to World War I

> 1914, summer : Crisis in the Balkins led to conflict When a Serbian terrorist assassinated Archduke Francis Ferdinand ...

Causes of the War

{HAIN IDEA } Nationalism, militarism, and a system of alliances contributed to the start of World WarI.

- system of nation states that were formed led to competition
- NATIONALISM AND ALLIANCES
  - Europe's greatest powers were divided into 2 allian
  - the tomple relationse (1992) AND the Tought Environme (1907
    - ·Germany
    - · Austria-Hungary · Itaiy
- . France . Great Britain · Russia



13. Make sure you use titles, dates, and headlines in different styles of writing so that you can find things easier.





# WRITE NOTES

• The large box on the right is for writing notes.

 Don't write down complete sentences. Use abbreviations and bullet points if possible.

 Skip a line between ideas and topics.

J	NOTES
0	



# **REVIEW & CLARIFY**

KEY POINTS & MAIN IDEAS	ALLIPROPORA MELANOLEPICA CHENESE LET - "BIG BEAR CAT" GLANT PANDA: USED TO DESTINGUESE IT FROM THE RED PANDA BEAR WATTVE TO SOUTH CENTRAL CHENA LIVES IN A FEW MOUNTAIN RANGES IN CENTRAL CHENA ITVES IN A FEW MOUNTAIN RANGES IN CENTRAL CHENA MAINLY SILENDAN PROVINCES SHAANTE & GANED USED TO LEVE IN COMLAND AREAS, BUT HAS BEEN DRIVEN OUT AS A RESOLT OF: - FALMENG - DEFORESTATION - DIRER DEVELORMENT ORDER: CARNEVORA, BUT EATS: - DIVE TYSK BAMBOO, OTHER GRASSES, WILD TURES, MEAT (BERDS, RODENTS, CARELON)
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Review the notes as soon as possible after each class.

 Pull out main ideas, key points, dates, and people, and write these in the left column



	ANIM	L BIOLOGY - 09 / 02 / 2016
	KIMIS	I DEL GLANT L'ANDA Allundrida Melandueuca Crimese ett. "Rig Beak Cat" Clant Panda: UGD 10 dividinguisa 11 fram tre Rid Panda
	ORIGEN/PROVENANCE	BEAK NATEVE TO SOUTH CENTRAL CHEMA LEVES ON A FEW MOUNTAEN RANGES IN CENTRAL CHEMA
Write a summary of the main		MARNEY SECRUAN PROVINCE, BUT ALSO NEIGROORENG PROVINCES SRAANDE & GANSU
ideas in the bottom section.	DRIVEN DOT OF LOW- LANDS	USED TO LEVE EN LONGAND AREAS, BUT BAS BEEN DREVEN OUT AS Result to: - Farmeng - Deforestation - Otoer Development
	CLASSIFICATION Dili	ORDER: CARNIVORA, BUT EATS - Over 19% Bambod, other Grasses, wold Tobers, Meat (Bleds, Rodents, Carridon)



# STUDY YOUR NOTES



 Re-read your notes in the right column.

 Spend most of your time studying the ideas in the left column and the summary at the bottom. These are the most important ideas and will probably include most of the information that you will be tested on.

© www.unravellingmymadness.com inspired by www.coe.jmu.edu/learningtoolbox







16. Sketchnoting is the prettiest way to take notes. Here's what to know if you want to try it:



17. Add in boxes, bullet points, Post-It notes, and more to highlight certain things and organize all of the info in the best way possible.





18. Don't forget about your notes the second class is over! They're supposed to serve a purpose. Here's how to make the best use of them:



How to <u>REMEMBER</u> WHAT YOU WROTE I IN
by: study-Hack.com CLASS
D Listen actively - write in your own Words, connect to what you already know
2) Pay attention & ask questions if smth is unclear.
3 <u>Review your notes</u> in the evening & <b>quiz</b> yourself (use active recall)
Study a little every weekend -> better to study a bit more often than pull allnighters

19. Two things from here to keep in mind: one, you can always embellish and add on later when doing homework, so don't forget to focus on what your teacher is saying and not just your notes. Two, if you prefer to have things on the computer, scan or copy them later!









1. Always title & Date your notes. Consider even including a page in the front which dictates what chapters are covered, How many pages they are, etc.



Ch.1 pg1-12 Ch.2 pg/2-30 Ch.3 pg30-40 Ch.4 pg40-53 Ch.5 pg 53-67

3. After lecture, try to re-write your notes. I personally make a condensed version of each chapter's notes in a <u>small</u> notebook and also type/edit my notes on the computer.

Highlight Super important Stuff, Use pretty colors!

\* Remember

important?

-Definitions

Organize, add missed information from your textbook or from the lecture's powerpoints (;f available)



2. During lecture, pay particular attention to things written on the board or things specifically emphasized by your professor. Do NOT try to write down powerpoints in their entirety.

Mark down key concepts, questions, and sketch important diagrams.

→ pay attention to the professor, not your notes, ← you can add later.



\* Key concepts \* Questions? [Mul\_ Diagrams

4. Reviewing your notes In-depth for confusion, <u>Review</u> advanued Preparation for exams -> use typed notes Quick review right Review before exam

Or to Clear up Small guestions. -> Use Small notebook

OOD LUCK!

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20. Your notes don't just have to be paragraphs. Here are several different formats you can choose from:



