



# Which Is Better for Letter Memory?

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## Introduction

In the teaching process it is so familiar that teachers give the notes to the students as a way of helping them for future reference. There are various ways where the students can take the notes from the teacher. In our country most of the students opt to take the notes by hand but others decide to use electronic equipment such as computer, iPad and even smart phone to take the notes.

A common question students, teachers, parents and other academia ask is whether the students should write notes by hand or typing using electronic equipment such as computer. In short, studies generally show that writing notes by hand allows the students to remember the material better than typing by computer. However, when it comes to actually choosing which method we should use, the answer is more complicated than that, since there are situations where the use of computer could be better than writing them by using hand.



## Method

In addressing the above question the two research methods were used.

1. Students interview.
2. Selection and grouping of participants.
3. Teaching process.
4. Classroom test.



## Procedure

### Students Interview

In this method a group of 20 students were asked the question "How writing by hand improves your memory"

According to the students answers writing by hand appears to improve our ability to remember things, meaning even in today's tech-obsessed society, the pen just might be mightier than Word. One student comment "When we write by hand, we have to coordinate verbal and fine movement systems". " Another students addressed that I see this with students all the time in their note taking. Those on laptops will write hundreds more words, but if I ask them, 'what did we just talk about?' the answer will be something like, 'mmmm, I'm not 100 percent sure, I was going to take a look at that later.' The idea being, while they were typing, they weren't really connecting to or processing the information, but were more focused on getting everything down.

### Selection and grouping of participants

After interviewing the students, a group of 40 form four students was selected randomly. And then they were divided into two groups of 20 students each.

### Teaching process

The two groups of 20 students each were taught the topic of genetics using two different methods of taking notes. The first group was taking notes by writing them down and the second group was taking notes by typing them down. The teaching went on for one week.

## Results

### Classroom test

In conducting this method, the students were given one week to prepare for the test. Then after that one week the students were given the test and the results were as follows and the marks were given by 100%

- The students addressed that taking notes using the pen-and-paper method leads to better recall ability than typing them up.
- A study on note-taking in the classroom showed that students who take lesson notes by writing them generally perform better in tests than those students who type their notes on a computer/tablets.
- In the case of taking notes during lesson, the main issue with typing is that people are more predisposed to engage in verbatim note-taking when they type, in comparison with when they write their notes by hand. This means that when using a laptop, people tend to just type whatever the speaker or lesson says, in a way that involves a relatively shallow cognitive processing of the material.
- Various studies also show that when a person writes down notes they tend to remember them more than when they type them, due to the fact that the nerves that are found in fingers are directly connected to the brain, these nerves help to transfer information to the brain through the fingers. Hence the students that were taking notes by writing them down had a greater long term memory as compared to the ones that typed them down thus they were able to get higher marks compared to the students that typed them down.



Group 1: Taking the notes by hand



Group 2: Taking the notes by using

S/N	Students Code	Marks
1	A1	61
2	B1	74
3	C1	56
4	D1	82
5	E1	58
6	F1	78
7	G1	65
8	H1	59
9	J1	81
10	K1	67
11	L1	83
12	O1	49
13	P1	70
14	Q1	65
15	R1	51
16	S1	66
17	T1	60
18	U1	77
19	V1	83
20	W1	65

Computer / iPad		
S/N	Students Code	Marks
1	A2	56
2	B2	34
3	C2	24
4	D2	69
5	E2	45
6	F2	40
7	G2	31
8	H2	53
9	J2	40
10	K2	54
11	L2	43
12	O2	39
13	P2	66
14	Q2	42
15	R2	30
16	S2	52
17	T2	41
18	U2	28
19	V2	37
20	W2	32

## Conclusions

Conclusively, we have recommend that writing notes by hand generally improves your understanding of the material and helps you remember it better, since writing it down involves deeper cognitive-processing of the material than typing it. The main issue with typing is that it encourages people to transcribe the material verbatim, exactly as presented by the speaker, which means that they don't process the material as much. This is difficult to avoid, even if you're aware of the issue.

Also despite the fact that typing notes on a computer doesn't promote as much cognitive processing of the material, typing notes and writing them by hand are both valid note-taking methods, and each can be preferable in different situations, as they both have their advantages and disadvantages.

Moreover writing notes by hand is better if you need to process the material as you're writing it, and especially if you're expected to reach a conceptual understanding of the material (as opposed to factual understanding). The main issue with writing is that if you can't write fast enough you might not be able to keep up with the speaker, which could cause you to omit critical information.