



Typing or hand-writing essay exams: what should students choose?

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Background

- Currently all our course work is electronic.
- Exams – still ask students to hand-write answers.
- Previous work shown that we can allow our students to choose the mode of writing in exam with no effect on final mark – use exam4 software.
- We know laptop ownership is almost 100%



Exam4

- Available from [http:// www.extegrity.com](http://www.extegrity.com)
 - Versions for PC and Mac
 - Students download & install on their own laptop
- Locks laptop so no access to internet / hard drive
- Regular snapshots of student work
- All data encrypted & needs to be de-encrypted at the server end. Final submission via wireless network to server – can only print the final paper



Software in action

Student can change font size,
colour and set a timer

Basic word processor only



Word count, timer provided



Practical considerations

- Questions still on paper
- Exam script provided for planning/notes (not marked unless indicated)
- Diagrams (if required) better on paper
- European foreign language characters OK, not character sets like Hebrew or scientific notation
- Course team decide on options e.g. spellchecking



What happened?

- Offered the students the choice in 2010-2011 exam diets – all first year courses and some Hons.
 - Uptake less than 10%
- Offered the students the choice in 2011-2012 exam diets – all first and second year courses
 - Uptake less than 10%



What do students say?

- Comfort with what's familiar
 - *“I have always written exam essays by hand; it's what I am used to and what I expect”*
- Typing speed
 - *“When typing I tend to type fast and have to go back and correct the inevitable mistakes”*
- Anticipated differences in writing
 - *“I will feel more inclined to re-read my work on computer”*
 - *“With the computer it is easier to have an overview and to organise the structure”*



- Revision of finished work
 - *“I’m not sure whether using a computer would actually hinder my ability to write fluently and condense what I mean, as I would be constantly going back over my work and rewording parts of it”*
- Concentration
 - *“My hand won’t hurt as much on a computer”*



Practice Exam

- First year, first semester (had no experience of University exams)
- Two questions, no choice
- Everyone does question 'A' first, then 'B'
- Half the class type first
- Half the class type second
- Surveys & focus groups to collect opinions
- Essays marked and feedback provided
- 2 x £50 prizes as an incentive to really try hard !



Would you ever consider using a computer to word process an essay type exam?

		AFTER		Total
		No	Yes	
BEFORE	No	4	2	6 (17%)
	Perhaps	2	13	15 (42%)
	Yes	2	13	15 (42%)
Total		8 (22%)	28 (78%)	36

NB some students completely changed their minds



- Yes to No
 - *“I feel more comfortable writing in an exam situation”*
 - *“I preferred the hand written exam”*
- No to Yes
 - *“I learnt that using a computer is much more productive as it is more flexible.”*
 - *“I’m quicker and I use a better vocabulary when I type”*



- Perhaps to Yes (13 / 36)
 - *“I also find it helps by just appearing more structured and less messy than my hand-written exams.”*
 - *“I think I may be willing to change and improve sentences more.”*
 - *“I feel that I am quicker at writing on the computer, and sometimes more articulate.”*



What about planning?

- *“I felt more confident using the computer since that is what I am used to, possibly over confident, because I felt I was much more careful with the handwritten exam. I think that the main difference in my approach was in my planning. I wrote more words on the computer, probably too many, but had no time to cut down because of my haphazard way of just writing and changing things as I go along.”*



- *“I made a plan for the handwritten essay, but not for the computer version.”*
- *“I stunned myself because I did no planning for the answer that I typed; I simply began to write and revised in the course of the composition of my answer.”*
- *“I started typing immediately because I knew that I could edit my answer as I went along.”*



Do they think planning helps – Yes?

- *“Handwritten I had thought about it before I started so I knew where the essay was going, but less thought was involved in the computer version.”*
- *“When typing you write more, so you say more things that might not actually be necessary.”*



Do they think planning helps – No?

- *“Although the handwritten version is better planned, then you tend to stick to that plan, its not really changed. The typed version develops much more as it goes.”*
- *“When handwriting, I feel that I am forced to approach the task with linear and sequential thinking, whereas with the ability to type, I am able to come to the task with a more scattergun approach.”*



But did planning affect the mark?

- Asked question “ whether students made a more detailed plan when using pen and paper” – did they agree, disagree, etc
- No correlation with final mark!



How important is appearance?

- *“It’s a good feeling to know that with typing I am able to insert a thought seamlessly into what I have previously written. It can be embarrassing to do so with handwriting, inserting all sorts of asterisks and arrows pointing to different notes”*
- *“The computer editing opportunities allowed me to work longer and make revisions that I would not otherwise have done.”*



Predicting their score?

- Students asked – which essay, typed or hand-written did you expect to get the higher mark
- Students hopeless at predicting!



Choice compared to best mark from practice exam

		Score in Practice	
		Hand better	Typed Better
Exam Mode	Handwrite	30	11
	Type	7	4



Choice compared to viewpoint after practice exam

		Would you consider typing?			Mean score
		Yes	No	Missing	
Exam Mode	Handwrite	23	8	18	59%
	Type	8	0	3	62%



So what is the best choice – more questions than answers?

- Will practice help them to choose what works for them?
- Is choice the best thing?
- Do they need more support on what is wanted from exams?



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