Lecture 03: Being Critical

An intellectual virtue

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Key topics today

The week ahead

- Personal Tutor Meeting about MD this week
- also Weeks 8 (ethics), 13 (write-up prep), 17 (Stats)
- Critical Proposal overview and tips
- Lab preview - Your Critical Proposal Target Paper

Personal Tutor Meeting Week 3

This week (week 3) you have 50 minutes with your Personal Tutor to discuss the Mini-Dissertation.

> Tip
>
> Your Personal Tutor is ANOTHER source of guidance and support.
> Give them the information they need to best help you on this journey.

> Dear PTs, “Next week, you are given **no information whatsoever**, and are asked to turn up to your session with nothing other than perhaps a pen and paper, a big smile, and anticipation of lots of exciting research in the making.”

Future PT Sessions devoted to the MD

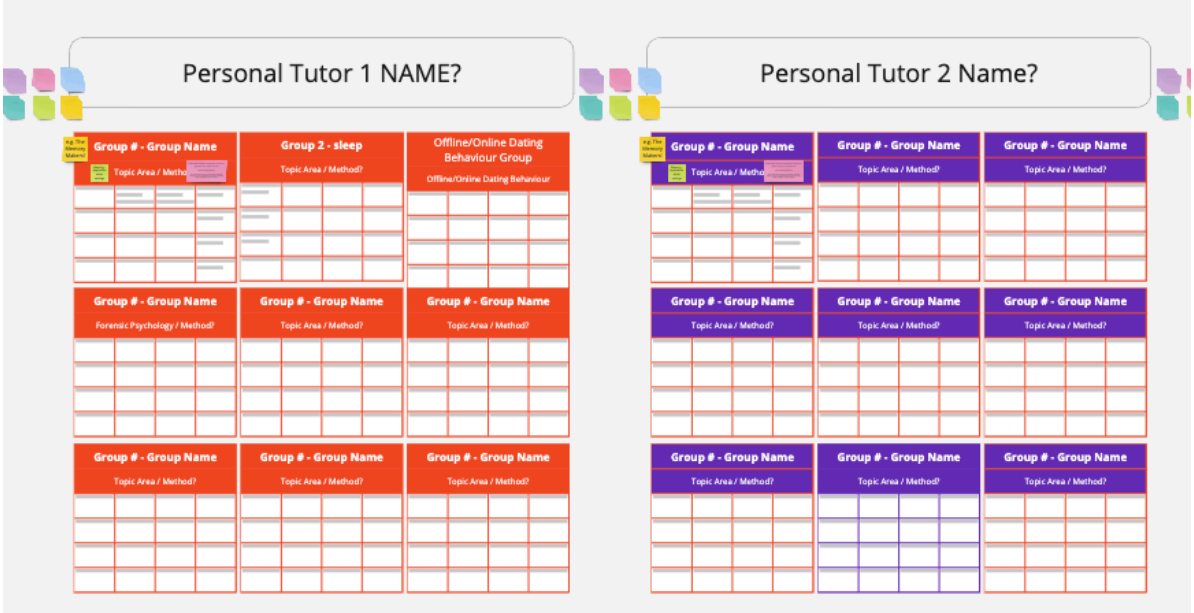
Week 8 - Check on status of Ethics application, and troubleshooting

Week 13 - Session to support Analysis Planning and Writing up/Submission preparation

Week 17 - Result interpretation, and any concerns arising in the final phase of the MD

Please fill in a group on your Lab Miro Board.

Even just your names... Help us to help you. Please.



Any Questions?

Being critical and evaluating the work of others

This is a topic and skill you've already been shown

PS51015C: Essential Skills for Psychologists

Academic Skills 3: Critical Thinking and Analysis

Teaching Week 14 (Fri 11 Feb)

Review these materials and consider your performance of the assessment, and any feedback

This year Critical Analysis has a ‘point’

The objective of the Critical Proposal is that you start to deploy the tools you have practiced in the service of your Mini-Dissertations.

A ‘practical’ exercise, which we are giving feedback to once… but that you will do multiple times for your Mini-Dissertation.

GOAL: to develop some aspect of your study design or methodology.

You will probably follow this process ‘a few times’ for your final year dissertation!

The Four ‘Big’ Validities

Internal Validity: The degree to which an experiment accurately assesses variable relationships without interference from confounding factors.

External Validity: The degree to which study results can be applied to different populations or settings, indicating generalizability.

Construct Validity: The evaluation of whether a test effectively measures the intended theoretical construct using multiple indicators.

Statistical Validity: The assessment of whether statistical methods used in data analysis yield accurate conclusions from the data.

https://opentext.wsu.edu/carriecuttler/chapter/experimentation-and-validity/

Reading list items (Barber 2002; 2004)

BARBER

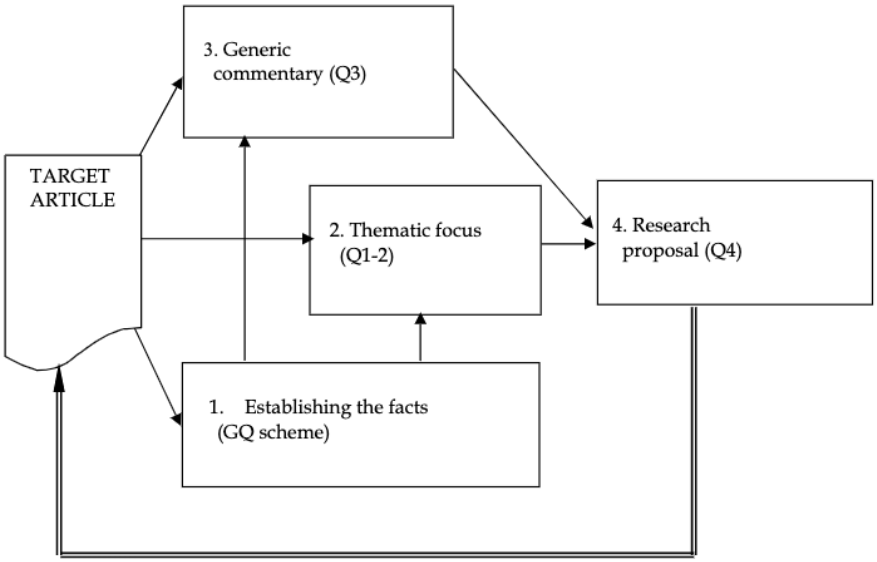


Figure 1

Proposed scheme for a course on critical analysis of psychological research

Table 3

Guiding critical analysis: example of 'orienting questions' for a fictional article

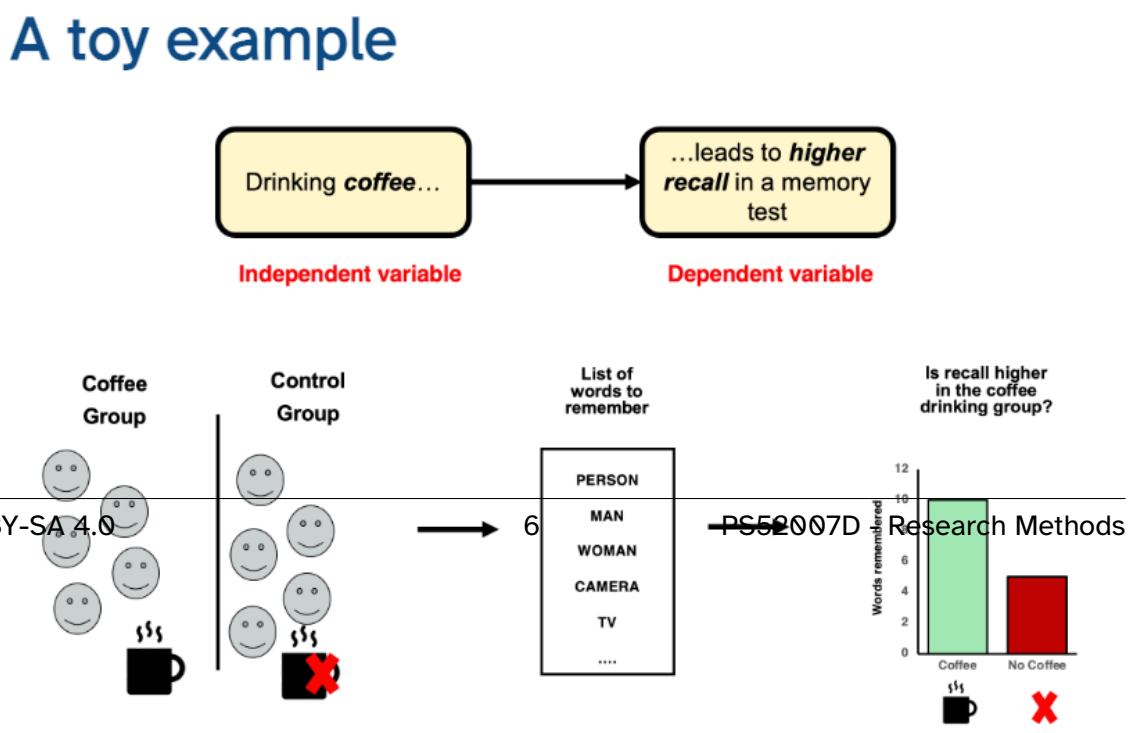
1. How did the authors seek to ensure the 'ecological validity' of their study? What theoretical or methodological issues did this raise?
2. The authors used 'improved' measures of face recognition and sought to overcome experimental design and statistical weaknesses in previous research. Did they succeed in these respects?
3. Write a brief general critique of the study.
4. Reflecting on the state of research on the issues they addressed, the authors observed that 'much remains to be done'. What study or studies would need to be done to bring about a convergence between research on this topic and general accounts of remembering?

Table 4

Towards a general critique: the JORI mnemonic

Justification	Has a case been m conducting the inve reported?
Operationalisation	Have the hypothese appropriately realis
Replicability	Has sufficient detail for a replication to b
Internal validity	Is the internal logic (design) satisfactor
	Have the results be correctly and thorou
Presentation	Are there any seriou presentation of the format)?
	Have the data been effectively and in su
Interpretation	Have the data and interpreted satisfact correctly?
External validity	How far can the find generalised?
Final judgement	Has the psychologi the study been esta
	Did it achieve any p topic matter?
	Is the study a comp research considere to the declared (or objectives?
	Are there any groun the decision to acce publication (given th applying when it wa

Let's look at the example from last week



How do I do it? [one approach]

Review literature on a key part of your ‘puzzle’ (an IV, a ‘tool’, the DV etc)

Apply critical evaluation to carefully chosen paper(s)

Consider how it might realistically guide or inform your own research

Identify a procedure to partially replicate, replicate, or replicate and extend/improve

Detail how that takes shape and reflect on your confidence, skill base, perception of value

or

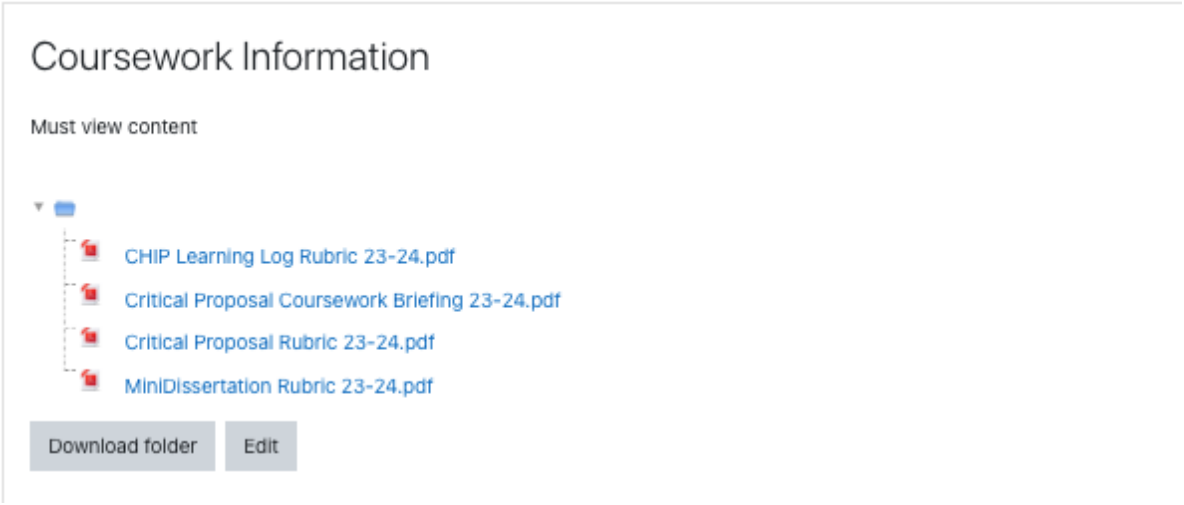
You could approach it strategically as a group.

Identify areas to take ownership of, then divide and conquer!

Or fly solo and agree to later apply the same process to a mutually beneficial part of your study

Critical Proposal Support

Briefing and Rubric



Briefing

Goldsmiths
UNIVERSITY OF LONDON

Critical Proposal Coursework Brief

Write an 1,800 word critical evaluation on an empirical paper from a Psychology Journal within your chosen field of research, including critical reflection of how you and your group might improve upon it, and/or build on its strengths

70% of your mark will depend on the quality of your critical assessment, 30% will depend on your suggestions for how your individual and group efforts in the Mini-Dissertation might improve research in this area. See Rubric for more detail.

- We stop marking at 1,800 words. No penalty for going over, but the words you use after 1,800 words cannot win you marks
- Worth 15% of your module grade for PS52007D (30 Credits)
- Your reference list does not count towards the word count
- You must use the Critical Proposal Coversheet and use ONLY your 8 digit Student ID in the filename
- You must focus on an empirical article (i.e. an article that reports the collection of quantitative data) from a Psychology Journal. You are perfectly permitted (encouraged!) to confirm the suitability of your paper with your Lab Tutor!

Rubric

	FAIL (UNSATISFACTORY)	3RD (SATISFACTORY)	LOWER 2ND (GOOD)	UPPER 2ND (VERY GOOD)	FIRST (EXCELLENT)
SUMMARY: [*Does the proposal summarise the chosen empirical article?*]	There is no summary of the chosen empirical paper.	The chosen empirical paper is described, but with inaccuracies or imprecision.	The chosen empirical paper is described, with only a few errors, gaps, or a minor lack of clarity.	The chosen empirical paper is clearly and fully summarised, with appropriate terminology and precision.	The chosen empirical paper is clearly and fully summarised, with excellent terminology, accuracy and accessibility, showing a comprehensive understanding of the paper.
RESEARCH QUESTION [*Does the proposal critique the research question and general domain?*]	There is no overview of the research domain or research question addressed.	The proposal summarises the research area and general question addressed, but does so imprecisely or with errors.	The proposal accurately summarises the domain of research and the specific question addressed in the paper.	The proposal accurately summarises the domain of research and the specific question addressed in the paper and does so in an accessible and precise manner.	The proposal accurately summarises the domain of researchand the specific question addressed in the paper and does so in an accessible and precise manner while evaluating the merit or importance of the research.
METHOD [*Does the proposal critically evaluate the chosen method and operationalisation of variables?*]	There is no attempt to evaluate the methods of the paper.	Evaluation of the methods are few and preliminary.	Evaluation of the method is clear, but doesn't consider important aspects.	Evaluation of the method is clear and focusses on important aspects.	Evaluation of the method is clear, identifies the most important aspects, and the impact on possible results is argued.
OUTCOME [*Has the proposal critically evaluated the analysis, reporting, and interpretation of the results?*]	There is no discernible evaluation of the results section.	The proposal makes few, superficial comments on the presentation and analysis of results.	The proposal makes a good attempt at presenting an evaluation of the results, but they are preliminary.	The proposal makes good suggestions for how the results may be more accurately presented and analysed.	The proposal shows insight in the evaluation of analysis, reporting and interpretation of the results of the chosen study.
DISCUSSION [*Does the proposal address how well results are integrated into the literature, and how the authors address limitations and opportunites for extension?*]	The proposal has failed to address how the results sit within the literature or the authors efforts to critique their own work.	The proposal presents preliminary ideas on how the research integrates results and appraises the research.	The proposal presents clear appraisal of how the research integrates results and appraises the research.	The proposal presents thoughtful evaluation of how the research integrates results and appraises the research.	The proposal examines how results are discussed well and presents a robust examination of the researchers discussion.
IMPROVEMENTS [*Does the proposal present means by which to avoid limitations and/or build on strengths of the study?*]	The proposal makes no effort to mitigate limitations or build on strengths.	The proposal has identified steps by which to EITHER avoid limitations or accentuate positive aspects of the study.	The proposal has dealt with limitations AND strengths and proposed improvements.	The proposal has identified important limitations and strengths and presented feasible improvements.	The proposal identifies and argues the most salient areas of improvement and presents carefully considered and supported suggestions for improvement.
CRITICAL REFLECTION/CONCLUSION [*Does the proposal clearly summarise key points from the essay and propose specific means by which the student may improve research in this area?*]	There is no reflection on how the points made in the essay work together or how the student may feasibly improve work in this area.	There is an effort to synthesise the argument made during the essay and an attempt to illustrate how the author may improve research in this area, but it is vague.	A conclusion is presented and it features reflections on future improvement that don't tie together or have limited focus on priority.	The conclusion brings the main points of the critique together and a clear set of ideas presented by which the student may improve research in the area.	The conclusion synthesises the main points of the critique nicely with clear evaluation. The student has presented a thoughtful and focussed reflection on how they might make a meaningful improvement in the research field.
DESIGN SCHEMATIC [The inclusion of a copy of the Experimental Design Schematic 2x2 grid is required. At the very least, it must include details of a single IV, with 2 levels, and a calculated Effect Size]	Design Schematic not included.	Design Schematic included but fails to either break down one IV with two levels (relevant to the target paper) or present an effect size	Presents the schematic with correct details of at least one IV with an effect size	The Design Schematic is presented and includes correct information for one IV, an effect size and at least one other element (e.g. Hypothesis, Sample Size, Details of DV)	The Design Schematic is presented and includes correct information for both IVs, an effect size for each and at least two other elements (e.g. Hypotheses, Sample Size, Details of DV)
FORMAT AND REFERENCING [*Is the proposal well-writte, well-presented, with appropriate in-text citations and references?*]	The proposal is poorly formatted and referencing is either absent or very poorly inserted / inaccurately listed at the end.	The format is adequate and there is some appropriate referencing, but there are also lots of inaccuracies and omissions.	The format and referencing is appropriate for the most part, but there are a number of minor errors.	Formatting is good and references are inserted accurately and appropriately in the text and listed correctly at the end.	The format is clear and professional and referencing is to a high academic standard.
GRADE [Why was your proposal placed within its particular degree class?]	A typical fail contains no or very limited material to indicate the student has attended relevant lecture(s), attended relevant labs or read any relevant literature.	A typical third class proposal presents material that is for the most part relevant, but it is poorly organised and tends to contain quite a few errors, is overly general, or indicative of misunderstanding.	A typical 2:2 proposal contains relevant material that is mostly accurately presented (although there may be a few minor errors). However, the proposal fails to elaborate or integrate aspects of the critique into a logical structure or coherent narrative.	A typical 2:1 peoposal presents relevant material with very few errors. It is well organised and clearly expressed. However, the level of analysis is not particularly deep and critical reflection is formulaic.	A typical first class proposal presents highly relevant wide-ranging material that clearly addresses a considered critique of the study and domain. It also includes specific ideas on how the Mini-Dissertation (and future work by the student) may tangibly improve research in the area.

Please follow the suggested outline

SUGGESTED OUTLINE

Summary - Provide a summary of the article in 150-200 words in which you capture the essentials of what was done.

(a) What is the research domain and core question?

(b) What is the method?

(c) What is the outcome?

(d) Were there significant flaws or limitations in the study?

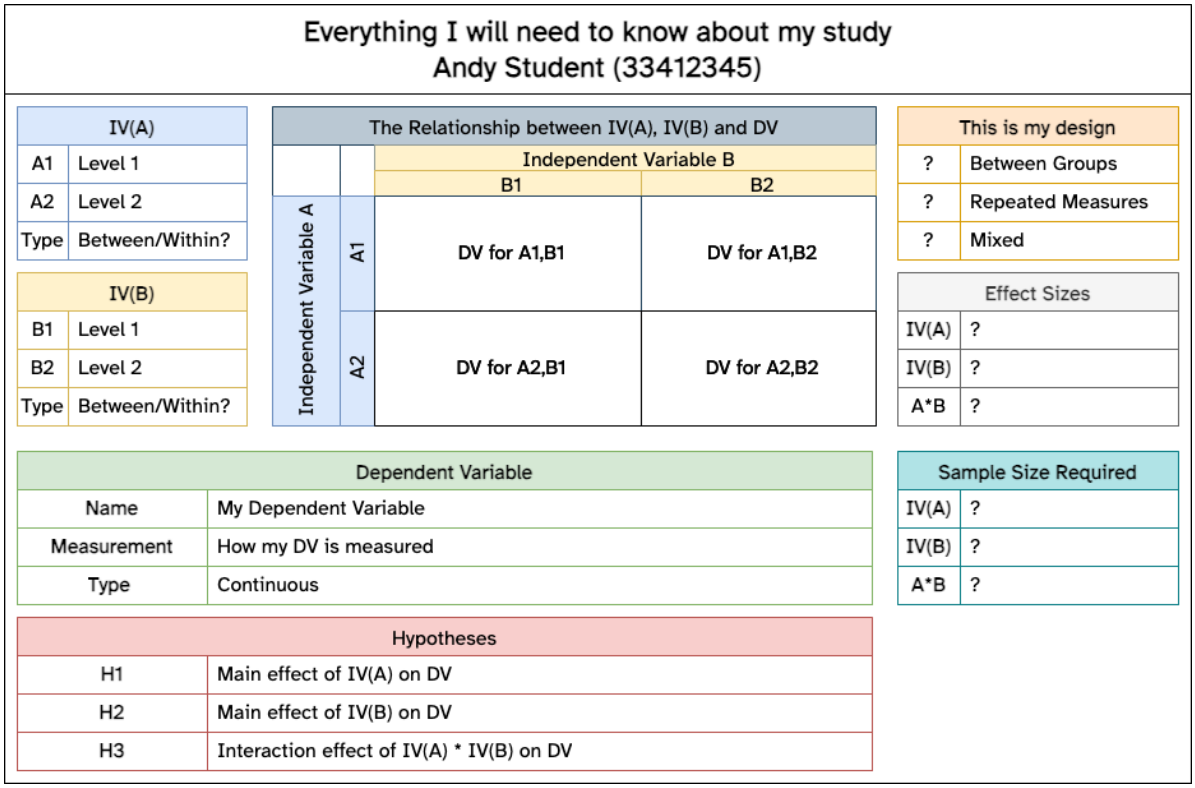
Research Question – Do the authors link their experiment to wider issues and theories in psychology? What question is the paper trying to answer? Is the hypothesis clear? Is it well argued?

Method - Is it clear and unambiguous? Could another (better) method have been used? Could you carry out a replication from this report? Is the design the most efficient for the purpose? Have broad theoretical constructs been well operationalised into specific variables?

Outcome - Is the Results section clear? Is the analysis unambiguous? Are all analysis and statistical choices appropriate? Did the experimenter answer the question?

Experimental Design Schematic – You are required to complete details of one IV and an effect size (drawn from the target paper) at least!

Design information



Everything I will need to know about my study
Andy Student (33412345)

IV(A)	
A1	Level 1
A2	Level 2
Type	Between/Within?

IV(B)	
B1	Level 1
B2	Level 2
Type	Between/Within?

The Relationship between IV(A), IV(B) and DV

		Independent Variable B	
		B1	B2
Independent Variable A	A1	DV for A1,B1	DV for A1,B2
	A2	DV for A2,B1	DV for A2,B2

This is my design	
?	Between Groups
?	Repeated Measures
?	Mixed

Effect Sizes	
IV(A)	?
IV(B)	?
A*B	?

Dependent Variable	
Name	My Dependent Variable
Measurement	How my DV is measured
Type	Continuous

Sample Size Required	
IV(A)	?
IV(B)	?
A*B	?

Hypotheses	
H1	Main effect of IV(A) on DV
H2	Main effect of IV(B) on DV
H3	Interaction effect of IV(A) * IV(B) on DV

More tips

- Please review the “SUGGESTED ESSAY OUTLINE” in the coursework briefing
- No need to follow it robotically, be strategic & selective in terms of details
- Selection of a ‘good’ paper to focus on is an integral part of the assessment!
- Do you think the first google result will be a fruitful paper? No, of course you don’t!
- Use your Lab Tutor and me to get a sense of confidence. Early.
- Tell us how you are searching and what you are looking for
- Confirm the paper with us in a lab session [Priority given for this]

Even more tips

- Use some of the tools presented in the previous lab activity to help track down a suitable paper
- Give yourself time to read, review, re-read and select your juiciest points

- Avoid any discussion of methodologies that cannot inform your study directly
  - e.g. Clinical diagnostic procedures, fMRI technicalities, Criminal Record or Case Study review procedures

You can (will) use LOTS of this in your MD!

This isn't a sidetrack exercise. It's a critical step in your project

Note your references, note your main points, be organised

Weeks 4 & 5

Talking about Variables and the 3 'flavours' of ANOVA in week 4

Week 5 is 'power calculations' and opportunity to discuss CP

But we will be moving on and the CP will be part of your independent study

Same opportunities for RASA submissions/summer deferrals & resubmissions

Questions?