Techniques for Improving Reading and Writing Skills

D'Skills Day Workshop, 16th SPRU DPhil Day

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Contents

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Reading

- Identification, selection, engaging
- Relevant academic literature

Writing

- Bottom-up VS top-down
- Skeleton structure
- Putting flesh on the bones
- From notes to writing
- Editing
- Revising

Some final tips and advice

Background

Stress on DPhil students

- Often greatest when writing up
- But also result of 'inefficient' approach to reading
  - Much collected material 'wasted' when get to writing stage

Some textbooks on writing but not very useful?

Personal experience

- Own publications
- >20 DPhil students
- PhD examiner

A lot of tacit knowledge involved ('riding a bike')

- Tried to identify & distil

Highly personal – may or may not work for you!

Some questions

How many of you have been taught to write?

- How? Formal or indirect?
- Different elements in writing process?
- What constitutes good writing?

How many taught how to read (articles etc.)?

- How?
- Different elements?
  - e.g. précis, critique

How many of you

- Find writing easy?
- Enjoy it?

Reading – 3 elements

1. Identification

- Standard library search techniques
  - 'Snowball'
    - Backwards via references
    - Forwards via citations
      Web of Science VS Google Scholar – pros & cons
  - Search engines + key words
    - Learn to use 'advanced search'
  - Suggestions from supervisors & others

2. Selection

- Identify key authors/publications
  - Web of Science (WoS)/Google Scholar (GS) ➔ HCPs
- Skim abstract, intro, conclusions ➔ read in detail?
- Borrow/photocopy/pdf file

Reading – 3 elements

3. Engaging

*Reading alone is **not** sufficient*

Need to engage e.g.

- Annotate photocopy (often impossible with pdf)
- Take notes (*in own words* – reduce plagiarism risk)
  - Handwritten (paper, index cards)
  - Mini Word files on PC
  - Endnote etc.

  If notes extensive
  - Underline/highlight
  - Categorise/label with key words

The more extensive the notes, the more your brain is likely to engage with the text!

- Photocopy or pdf file =/= 'engagement'

Relevant literature

Two types

- Specific to subject of thesis (e.g. sector, case-study)
- More general academic literature from which you draw
  - theory, concepts, models, analytical framework
  - hypotheses, research questions, problems to address
  - methodological tools etc.

Examples of bodies of literature
  - Systems of innovation (national, regional, sectoral etc.)
  - Resource-based view of firm
  - Organisational learning
  - Development theory
  - Ecological economics
  - Actor-network theory
  - etc.

Embedding your thesis

Thesis needs

- To be embedded in prior body/bodies of literature
- To make a significant contribution to that literature

As STI studies developed, number of such bodies of literature increased and each become more specific

You can't engage with all of them!

Need to choose ~1-4

- >4 probably too many
  - Too much to read
  - Too complicated to integrate
- 2-3 – seek to develop some novel combination
- 1 – OK but need to go deeper

Where to embed it?

How to choose?

First identify key contributions in each area

- Web of Science ➔ HCPs

  Works for articles but less so for books

- Google Scholar ➔ HCPs

  Works for books as well as articles

  But more erratic; also less good for older refs

  ∴ Cross-check against WoS

- Review articles (if they exist)

- (Wikipedia – may indicate original sources, but can be misleading/biased, so need to cross-check)

Read very carefully

Interrogate the literature

If looks promising, take extensive notes

As take notes, ask how this theory/model/ framework etc. might

- raise new questions/hypotheses about
- provide framework for studying
- suggest novel interpretation of

  your specific subject

If little/no interaction

- Reject that theory/model/framework
- Move to next possible body of theory/knowledge

Extend the search

If looks potentially fruitful, extend search

- backwards – references to other key contributions

- forwards – citations by later authors (WoS, GS)

  - Developments of theory/model/framework etc.

  - Specific applications to your sector/case-study

    - Earlier in time

    - Other countries

    - 'Adjacent' sectors etc.

When to stop?

Repeat cycle

- Skim

- If looks promising
  - Take notes
  - Interrogate text

- Extend the search further?

As you get to grips with a body of literature, look for diminishing returns – signal to stop!

Time to move from divergent phase of thesis to convergent phase

Writing – why so difficult?

Processing ideas in your head at same time as trying to get down on paper

- Reveals problems that can then disrupt writing

There is no one best way to write!

- Individuals adopt very different approaches depending on psychological preferences e.g.
  - 'Skeleton' structure, than 'hang' key words/authors on it
  - Ideas map ('spider's web')
  - Free-form/stream of consciousness, then edit
- Writing generally not taught formally/directly
- Need to find what works best for you
  - e.g. hand-writing VS PC-based
    And if former, when to switch?

Writing – bottom-up approach

As build up notes from reading/empirical research, keep

- Searching for key points/new ideas/insights etc.
- Labelling with key words (may need to revise)
- Categorising (ditto)
- Sorting
- Identifying potential links

Begin to 'knit together' (joining bits of 'jigsaw')

- May be better to keep in note form at this stage (i.e. don't worry about prose)

Writing – bottom-up approach

Pros

- May be easier to get from reading to writing stage
- Satisfaction from sense of achievement that begun to draft some of building blocks of thesis

Cons

- May lack clear sense of direction
- May not be easy to join up with other sections

Writing – top-down approach

BM approach for a chapter (or lengthy section)

Read through notes taken from reading and from empirical research to refresh memory

Put on one side!

Start with blank sheet (or screen – but more constraining?)

Identify key topics/issues/points to be covered

- Get down in any order
- (Build up over time? i.e. keep adding to list)
- Not too many at this stage (e.g. 5-10)
- (Some may prefer a 2-D 'ideas map', but will later need to convert into linear sequence)

Identify key points

Sort key points into logical order

Written text constrained to be linear

> (Web documents can be more complicated/ interactive, but not theses)

No one perfect order

- Does this element best come before or after that one?

Shuffle around till happy

- Discuss with supervisor if in doubt

Summarise skeleton structure (e.g. in a diagram)

Skeleton structure

For each main element

- Begin to breakdown into sub-elements
- Label each sub-element with key words/points etc.

For each key word/point

- Try to recall authors/papers/interview notes that provides source of material
- Hang references to these on the skeleton structure ('Xmas tree')
- Better done on sheet of paper than PC?

Skeleton structure

Doing this may

- Reveal emerging links between sub-elements
- Suggest need to change order

If get stuck, put aside for a day or so, then return

Hold off going back to look at notes from reading/empirical work until extended structure clear

- Danger of getting bogged down in detail

Putting flesh on the bones

When extended structure finally clear

- Go back to notes from reading and/or empirical research
- If omitted any key points, add these in

Take material from notes to begin to put 'flesh' on bones of skeleton

- At this stage, probably need to go from single sheet of paper to several
- Alternatively, you may choose to shift from paper to PC at this stage, but beware that this can constrain the writing process

Add in notes

Section 3.1

- 3.1.1 Elements/key words a, b, c …

  ➔ Authors/sources p,q, r, s …
  Notes from p
  Notes from q

  …

- 3.1.2 Elements/key words d, e, f, g …

  ➔ Authors/sources t, u, v, w …
  Notes from t
  Notes from u

  …

- 3.1.3 Elements/key words h, I, j …

  ➔ Authors/sources x, y, z …
  Notes from x
  Notes from y

  …

Section 3.2

  …

Begin to integrate

In looking at notes from p, q, r, s, … may be able

- To see links and begin to synthesise

- To spot inconsistencies
  - In logic
    - Can these be removed? (If not, need to bring out in text: "On the one hand, … On the other, …")
  - In order
    - Can these be removed by changing order? (If not, bring out in text: "In section 3.2.4, we looked at/will look at …")

- To identify gaps that need to be filled *later*
  - More reading?
  - More empirical research or analysis?

- To spot links with other sections
  - In due course, will again need to build x-links into text, but for now just put in reminder to do later

Getting ready …

Once happy that chapter notes in ~ right order and comprehensive, next stage:

- Either make chapter notes more detailed
  - Draw more detailed material from notes taken from reading or from empirical research
- Or start process of converting notes to prose

Now the stage to switch from paper to PC?

- Some individuals may prefer to do so sooner
  - Danger of becoming constrained – single screen VS piles of paper notes spread round desk and floor
- Others may prefer to switch later
  - Typing on keyboard requires concentration – means brain can't focus exclusively on content

Now write!

At this stage

- Put aside notes from reading &/or empirical research
- Just work from notes prepared in mapping structure & content of chapter

Personal preference – free flow

- Look at chapter notes, then write sentence(s)
- Repeat

Alternatively, take notes (already on PC) and flesh out into continuous sentences

Depends on individual psychological preference

Keep pedalling!

Try to write quite quickly

Don't worry at this stage about

- Quality
  - Never perfect first time (e.g. Galbraith)
  - "The best is the enemy of the good" (Voltaire)
- English prose etc.
  - Correct later

Like riding a bike – you need to go at a certain speed to avoid falling off

Don't look back!

If you have

- taken (good) notes from reading/empirical material
- transferred these to your extended skeleton structure

you will be less tempted to go back to your original sources

Going back completely disrupts the writing flow

∴ *Avoid if at all possible!*

Targets and rewards

May help to set target word count for day

- Sense of achievement if met

Divide up day into e.g. 2-hour sessions

- Set word target for each
- Stop at point where next bit easy to write
- Give yourself rewards (coffee, cake etc.)

Don't allow any interruptions (phone, email etc.) and avoid 'displacement activities'

If discover a gap (or get stuck)

- leave that bit blank and jump over
- come back to fill later

Get to end as quickly as possible

Early editing

Put aside for a couple of days

- Danger – 'can't see wood from trees'

Then return and start editing

Separate editing for

- Content, argument etc.
- Prose, grammar, spelling, punctuation, layout

Don't try to do both at same time

- Require different parts of brain
- Interfere with each other – latter often dominates

Later editing

Put aside for >1-2 weeks so come back fresh
- Less psychologically committed to earlier claims

Switch roles from writer to critic

Try to identify
- Weaknesses in argument or evidence
- No clear relationship to central thesis
- Material in wrong place
- Gaps
  - Revisit reading notes? More reading needed?
  - More empirical research needed?
  - If so, do in advance of redrafting so don't interrupt flow
- Repetition, superfluous/redundant material
  - What needs to be pruned to simplify/clarify

Editing hard copy VS on PC

Edit hard copy?

- Can see several pages at same time
- Easier to scribble comments
- Can do at any time
  BUT
- Then have to re-enter on PC later

Or on PC?

- May seem quicker
- With use of 'comments' in Word, now quite flexible
  BUT
- Can be constraining or distracting
- More likely to become seduced by producing a 'pretty' page (all neatly justified etc.) rather than getting content right

When diminishing returns set in, time to pass draft to supervisor!

Redrafting chapters

Build up list of critical comments

- Own
- Supervisor's

Decide whether to insert as

- Annotations on hard copy
- Additions &/or comments on Word document
- Pros & cons (as above)

Schedule uninterrupted time to redraft

- Divide up task into sections
- Set targets
- Schedule breaks (especially if editing on-screen)

Redrafting chapters

1. Concentrate first on content
   - Clear introduction?
     - Aims? Summary of structure (+ 'signposts' for reader)?
   - Material
     - Essential or superfluous?
     - Gaps?
   - Line of argument
     - Each step substantiated (reference, example, data, quote etc.)
     - Runs clearly through?
     - Gaps? Or goes off at tangent?
   - Links
     - Backwards and forwards between sections
   - Strong conclusion
     - What do you want reader to go away remembering?

2. Then focus on improving English prose, grammar, spelling, punctuation, layout etc.

Iterate 1 and 2

Revising full draft of thesis

Almost certainly need hard copy

- Too big/complicated to do all on screen

Decide what material needs to be moved between chapters

Build in backward and forward links between chapters, especially at beginning and end of chapters

Check for consistent argument running throughout thesis ('Brighton rock')

- e.g. revisit research questions and revise/add/delete now you know what you have found!

Highlight what is your 'substantial original contribution to knowledge' and how this relates to previous work

Prune to simplify ('pile of sticks' game)

Some final tips and advice

(NB Again very personal!)

1. Learn to use 'style sheets' in Word
   - ➔ Consistent format and layout
   - Also enables you to use TOC etc.

2. Poor English, sloppy format etc. distract reader
   - Get help to improve

3. Complex phrasing and sentences =/= profundity of thought!
   - In STI *policy* research, need to be clear
   - Clarity may help enhance impact

Some final tips and advice

4. Enormous bibliography more likely to make examiner suspicious than impressed

    -   Internet + Endnote etc. ➔ bibliography 'inflation'
    -   Could you answer question from examiner on each ref?

5. The longer the thesis, the more likely the examiners will find fault rather than change their assessment

    -   My 'irritation threshold' ~300 pages

6. Be pragmatic/instrumental – the thesis is a rite of passage to the next stage in your life

    -   Aim for a reasonably successful 3-year research project, not **the** definitive text on the subject
    -   Remember doctoral theses are rarely read and hardly ever cited (except by the author & SPRU colleagues)!

Citations to SPRU DPhil theses

	Citations	Self-citations	SPRU citations	External citations
A Barry	2	1	1	0
D Hicks	4	3	1	0
B Godin	7	0	6	1
G Dosi	0	0	0	0
D Gann	6	1	5	0
M Hobday	2	1	1	0
M Meyer	7	6	0	1
P Nightingale	11	3	5	3
L Soete	7	1	3	3
A Stirling	4	4	0	0
J Tidd	0	0	0	0

Conclusion – it's not worth spending >3 years of your life!