Reading & Notemaking

Dr. Tamara O’Connor
Student Learning Development
Student Counselling Service
896-1407
student.learning@tcd.ie
http://student-learning.tcd.ie

@StudentLearningTCD
@StudentLearning

#LeanOnUsTCD
Learning Objectives

• Learn active, deep processing strategies
• Explore the different purposes for study tasks
• Learn about active reading and note making strategies
• Practise using learning strategies
I’m just going to the library for 4 hours….
(I’ll work out what I’ll study when I get there)
Active studying means

1. Working with the material to try to build understanding
2. Find a way process the information in a deep and meaningful way
How?

Have a framework
– Think about the purpose of the study task
– Consider the best way to approach it
– Reflect and review

PSR
– Purpose – why?
– Strategy – how?
– Review – check!
Discussion

1. How do you study (reading/notes)?
2. How do you read?
3. How do you take notes?
Reading
Good Reading is like Interrogation
Get reading – actively!

Purpose

• Strategies to suit:
  – Scanning
  – SQ3R
  – Note making

• Retrieval practise! Self-testing
Get Thinking - Reading

1. Asking questions
2. What is the point of view of author?
3. Evaluate evidence
4. Forming opinions
Being Selective

- Ask lectures/tutors what is most relevant
- Be alert for hints and clues
- Ask fellow students
- Ask students in years ahead
- Share reading
- Preview or skim before in-depth reading
Reading List:

Judd, C., Smith, E. and Kidder, L. 1991
300.Jud (1 copy)

Moser, C. A. and Kalton, G. 1971
300.723 Mos (10 copies)

Oppenheim, A. N. 1966, 1973
Questionnaire Design and Attitude Measurement. London.
011.422 Opp (3 copies)

Hoinville, G. Jowell, R. and associates. 1978
Survey Research Practice. London.
300.723 Hoi (1 copy)

Rose, G. 1982
301.072 Ros (4 copies)

Kurtz, N. R. 1983
Introduction to Social Statistics. London etc.
300.72 Kur (4 copies)

Blalock, H. M. 1960
Social Statistics. London
301.072 Bla (2 copies)

ESRI Reports: Read at least one of these research reports based on a social survey.
Ok, I’m finding it hard to concentrate, I’ll make a good effort to make precise notes.
Notes

Source → Your Summary Notes → Review Notes → Exams
Or
Essays
You want to be looking at questions
Types of Notes

1. Prose or summary
2. Outline or skeleton
3. Mind or concept maps
4. Cornell or 2 Column

How do you take notes?
Be careful with $\tan^{-1}$

Because $\tan^{-1}$ returns values between $-\frac{\pi}{2}$ and $\frac{\pi}{2}$, the formula $\arg(x+iy) = \tan^{-1}(y/x)$ only works if $x > 0$. This can cause problems in e.g. Qs 2vi and 10 of Complex Methods Sheet 1.

2vi Where is $u = \tan^{-1}\left(\frac{2xy}{x^2-y^2}\right)$ harmonic and find an analytic function whose real part is $u$.

First we determine where it is definitely not harmonic. Consider the lines $y = \pm x$.

As $(x,y)$ approaches the line $y = x$ from below ($x,y > 0$) (see picture), we have

$$\frac{2xy}{x^2-y^2} \to \infty,$$ so $u \to +\frac{\pi}{2}$.

If we approach from above, $u \to -\frac{\pi}{2}$, so $u$ is discontinuous. Similarly in the other quadrants.

So we assume $x^2 \neq y^2$. If $x = r \cos \theta$, $y = r \sin \theta$ then $u = \tan^{-1} \tan 2\theta$, which equals $2\theta$ provided $-\frac{\pi}{4} < \theta < \frac{\pi}{4}$. In this case, we can
Classical Social Theory - Dr. John Coutts

Marx.
- The alienation of man & the necessity for commodity.

Reification - Commodity fetishism. Social structures seem to create themselves despite the people involved.

Marx uses religion as a metaphor when complaining about capitalism.
- Comparison between worker under capitalism and person under influence of religion.

A counterfeit life? - Guy Debord.
- The Society of the Spectacle. Situationist movement - unwinding artistic group.

The modern society is the society of the Spectacle.
- People in modern world are alienated.
- They do not really live or experience - rather they observe and are handed down experience - represented for us.

We are spectators in our own lives.

All these spectacles have replaced religion.

Religion encouraged us to look to afterlife.
Modern world encourages us to look to what the modern world has to offer.
Commodities & pleasures.

Essential to this "non-life" is the commodity.

These commodities are offered to us as our salvation & key to happiness.
Society of Spectacle is a sham - these commodities never make us truly happy.
The Art of Reading Actively

A. Active = purposeful, critical, questioning.

B. Look for Main Ideas
   1. Survey (SQ3R) for general ones (Ch 5)
   2. Read paragraphs for more specific ones
      a) Each para usually has one main idea.
      b) Usually in topic sentence (1st or last?)

C. Look for Important Details
   1. e.g. proof, example, support for main idea
   2. Usually at least one per main idea
   3. Which do I consider important?

D. In hunt for main idea and important details:
   1. Watch for signposts
      a) Visual (layout, etc.)
      b) Verbal (clue words)
   2. Study diagrams, etc.
   3. Don't ignore difficulties

E. Evaluate the text
   1. Be sceptical (Expect the author to prove)
   2. Compare with my own experience
   3. What do I get from it?
   4. Discuss with other students

F. Make Notes:
   1. If I need them (for my purposes)
   2. At Recall stage (if SQ3R)
   3. Compare with other students

G. Concentrate:
   1. By seeking understanding (not memorisation)
   2. and see Chapter 4 hints

H. Vary reading speed:
   1. according to purpose
   2. but not at expense of understanding
Concept Maps

Photosynthesis

CO₂ taken in via stomata from air

Chlorophyll absorbs red & blue light traps energy in chloroplasts

H₂O split to give H atoms + oxygen from soil by osmosis

From CO₂ + H atoms converted to starch

Sugars
Motion repeats
force is proportional to displacement, and
in the opposite direction (as $F = ma$)
this is also true for acceleration
$\alpha = -\omega^2 y$
and as $F = ma$
also $F = -\omega^2 y_{max}$

NOT SHM if the force is not changing
e.g. only force acting is gravity
These can be proved by using the reference circle.

Equations
Starting at the equilibrium position, $y$ increasing
$y = A \sin \omega t$  \hspace{1cm} $v = A \omega \cos \omega t$  \hspace{1cm} $a = -A \omega^2 \sin \omega t$

Starting at maximum displacement
$y = A \cos \omega t$  \hspace{1cm} $v = A \omega \sin \omega t$  \hspace{1cm} $a = -A \omega^2 \cos \omega t$

Period
$T = \frac{2\pi}{\omega}$

Overdamped
$\zeta < 1$

Resonance
Energy is added by applying a force. Gives large amplitude if it is in line with natural frequency.

Graphs
$E_k = \frac{1}{2} m v^2$
$E_p = \frac{1}{2} kx^2$
Total energy is constant $E = E_k + E_p$

$F$ in opposite direction to displacement
The Cornell Note-taking System

<table>
<thead>
<tr>
<th>Cue Column</th>
<th>Notetaking Column</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write Keywords or Questions here</td>
<td>Write brief notes here as you are reading a book OR during a lecture</td>
</tr>
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<table>
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<th>Summary</th>
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### Types of Matter

1. **Solids**
   - Have a definite shape
   - Have a definite volume

2. **Liquids**
   - Do not have a shape
   - Have a volume

#### Summary

Write a short summary of the page here
• Ian Robertson on Success
WHERE TO FIND US

Phoenix House 7-9 Leinster Street South, 3rd Floor

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Email us at student.learning@tcd.ie

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