ARTS 101: Making the Most of Your Lecture

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OVERVIEW

Tips for making the most out of your lecture...

- How to prepare before your lecture
- How to get the most out of your lecture
- How to effectively studying and prepare for midterms & exams
How many of you...

- Pre-read your course content before class?
- Took notes during class?
- Reviewed your notes from class each night?
- Used your notes to study?
- ...actually studied for tests?
- ...submitted coursework and assignments on time?
Agenda

- Memory:
  - How do we conceptualize memory in Psychology?
  - What are the different processes of memory?
  - What are the different types of memory?
  - How reliable is memory?
Introduction to Memory

- What is memory?
  - Reconstructive Process: Not a recording
  - It’s selective, and details are excluded, altered, and added

- How does memory work?
  - Encode: enter information into memory.
  - Storage: maintain information in memory.
  - Recall: retrieve information from memory.
  - Forgetting: deficiency in one or more of these processes.
Levels of Processing

- Deeper processing of information produces more durable memory coding.

<table>
<thead>
<tr>
<th>Level of processing</th>
<th>Type of encoding</th>
<th>Example of questions used to elicit appropriate encoding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shallow processing</td>
<td>Structural encoding: emphasizes the physical structure of the stimulus</td>
<td>Is the word written in capital letters?</td>
</tr>
<tr>
<td>Intermediate processing</td>
<td>Phonemic encoding: emphasizes what a word sounds like</td>
<td>Does the word rhyme with weight?</td>
</tr>
<tr>
<td>Deep processing</td>
<td>Semantic encoding: emphasizes the meaning of verbal input</td>
<td>Would the word fit in the sentence: “He met a ___________ on the street”?</td>
</tr>
</tbody>
</table>

Figure 7.4: Retention at three levels of processing. In accordance with levels-of-processing theory, Craik and Tulving (1975) found that structural, phonemic, and semantic encoding, which involve progressively deeper levels of processing, led to progressively better retention. (Data from Craik & Tulving, 1975)
Enriched Semantic Encoding

- **Self-referent encoding**: relating new information to self.
  - Rogers, Kuiper, & Kirker (1977): replicated Craik & Tulving (1975) with list of adjectives applied to self.
Chunking

- Combining elements of information to create fewer but larger meaningful chunks of information.

FED PHD SRC IBM
Mnemonics

- Strategies or tricks for improving memory coding; convert random sequences of information into meaningful chunks of information.
  - Treble clef
    - Notes on Spaces?
    - Notes on Lines?
  - Letter before J?
Preparing before hand will improve your efficiency and comprehension during the lecture:

• Preview lecture slides
• Review notes from last class
• Plan to attend all of your classes
• Read textbook material, articles and other materials as assigned
Three-box Model of Memory Storage

- Three functionally distinct memory stores; not associated with distinct anatomical structures.
Short-term Memory

- Limited capacity memory system that retains information for 20 to 30 seconds.
  - Rehearsal can extend duration (e.g., Inculcation).
  - Peterson & Peterson (1959).
  - Most information required for short-time (e.g., traffic light) and then discarded.

- Capacity is 7 ± 2 items (Miller, 1956).
  - However, items (words) are combined into chunks.
Baddeley’s Model of Working Memory

- **Visuo-spatial Sketch Pad**
  - Holds and manipulates mental images.
  - Information about objects and their locations.

- **Central Executive**
  - Switches between tasks.
  - Deploys Attention to slave systems.

- **Episodic Buffer**
  - Creates episodic experiences from visual, auditory and verbal information.
  - Holds information from Long-term Memory.

- **Phonological Loop**
  - **Auditory Store**
    - Maintains auditory (verbal) information for a few seconds (Speech and Reading).
  - **Articulatory Loop**
    - Rehearses Information
DURING LECTURE

What is the Difference?

Passive Listening = ‘Hearing’ what the professor says and copying it down

VS.

Active Listening = Carrying on a conversation with your instructor in your notes

Why is Active Listening Important?

Questioning the information helps you to identify what is important and what should be included in your notes
DURING LECTURE

Note taking strategies:

- Keep notes organized, labelled and neat
- Use descriptive headings to separate themes/topics
- Use the margins to collect key points/terms/ideas or questions
- Summarize examples and main findings - the ‘so what?’
- Use shorthand, short forms, abbreviations and symbols to help increase your writing speed
- Laptop versus hand written notes
- Find a note taking method that works for you!
Cornell Note-taking Method

**KEY WORDS**
- main ideas & themes
- questions
- prompts to help you study/quiz yourself

**NOTES**
- record the lecture here

**WHEN:** During class

**SUMMARY**
- top level main ideas
- quick reference

**WHEN:** After class
Decay & Interference

- **Decay**: information stored is eventually lost unless accessed and rehearsed.
  - More indicative of sensory and STM

- **Interference**: similar pieces of information interfere with one another in either storage or retrieval.
  - **Retroactive Interference**: recent information interferes with retrieval of existing information (e.g., cramming for an exam).
  - **Proactive interference**: existing information interferes with storage of new information (e.g., maiden names).
  - More indicative of LTM.
Interference

Retroactive interference blocks earlier memories from being retrieved

1st Hour of Study

2nd Hour of Study

Memory Storage

Proactive interference blocks new information from being stored

Married Name

Maiden Name

Memory Storage

Information is Inaccessible

Information is Unavailable
Encoding Specificity Principle

- Recall of information is better when conditions during encoding and retrieval are similar.
  - External specificity: memories are easier to retrieve when context of retrieval matches context at time of encoding.
    - Names.
    - Something from another room.
  - Internal specificity: retrieval is better when one’s mental, emotional, or physical state matches state at time of encoding.
    - Mood.
    - Alcohol.
Eyewitness Testimony

  - Leading questions (that presuppose a truth) can change memory of events and create false memories!
  - Eyewitness testimony needs independent corroboration!

Leading question asked during witness testimony

Possible schemas activated

Response of subjects asked one week later, “Did you see any broken glass?”
(There was none.)

- “About how fast were the cars going when they hit each other?”
  - “Yes”—14%

- “About how fast were the cars going when they smashed into each other?”
  - “Yes”—32%

Expt 1: Estimated Speed for Verb Used

- Speed
- Expt: Contacted, Hit, Bumped, Collided, Smashed

FACULTY OF ARTS
Agenda

- Memory:
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AFTER LECTURE

Create a short summary

- Translate ideas into own words
- Use a logical form of organization
- Condense content from the main idea(s)
- Identify questions you may have or need clarification about
- Include questions to quiz yourself
WHAT CAN YOU DO?

Curve of Forgetting

Review regularly
Curve of Forgetting Explained

On day 1, At the end of the lecture you know 100% of what you know, however well you know it (where the curve rises to its highest point).

By day 2, if you have done nothing with the information you learned in that lecture, didn't think about it again, read it again, etc. you will have lost 50%-80% of what you learned.

By day 7, we remember even less, and by day 30, we retain about 2%-3% of the original hour! This nicely coincides with midterm exams, and may account for feeling as if you've never seen this before in your life when you're studying for exams - you may need to actually re-learn it from scratch.

The Importance of Reviewing Regularly

Within 24 hours of getting the information - spend 10 minutes reviewing and you will raise the curve almost to 100% again.

A week later (Day 7), it only takes 5 minutes to "reactivate" the same material, and again raise the curve.

By Day 30, your brain will only need 2 - 4 minutes to give you the feedback
DON'T JUST MEMORIZE!!

Bloom’s Taxonomy of Learning

1. Remember
   - Recognizing and recalling facts

2. Understand
   - Understanding what the facts mean

3. Apply
   - Applying the facts, rules, concepts, and ideas

4. Analyze
   - Breaking down information into component parts

5. Evaluate
   - Judging the value of information or ideas

6. Create
   - Combining parts to make a new whole

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GET MORE DIFFICULT