

6. Be able to define WM and explain differences between STM and WM?
Working memory: memory span + complex span tasks. The key difference is Working Memory deals with information that you can hold and manipulate (Baddley & Hitch, 1974). It's usually tested by including distracting tasks in between each item to be remembered.
7. Know the 4 different parts in WM and their roles, and be able to how those four part work in WM?
Central executive: integrates information from the phonological loop, the the visuospatial sketchpad, the episodic buffer, and long term memory. Plays a role in: focusing attention, selecting strategies, transforming information, and coordinating behavior. BOSS OF WORKING MEMORY!
Visuospatial sketchpad: processes both visual & spatial information. Allows you to store visual appearance and relative position store visual information encoded from verbal stimuli
Episodic buffer: temporary storehouse that can hold and combine information from the phonological loop, the visuospatial sketchpad. Important for: solving problems, arithmetic, science comprehension, remembering information
Phonological loop: processes a limited number of sounds for a short period of time
1. What is an acoustic confusion? And subvocalization?
Acoustic confusion: make fewer errors when the letter do not sound similar, relative to when they do. converted visual letters to sound-based code
Subvolaczation: rehearsal process of repeating to oneself.
2. What's the evidence of phonological loop and visuo-spatial sketchpad (Know how Baddley attempted to prove it)
People can work simultaneously on one phonological task (rehearsing the digits) and visuospatial task (making judgment about spatial location of letters)Even if the number of digits (3 vs 7) increased, it still doesn't matter!
8. Know what is N-back task and how it was applied to fMRI study
The subject is presented with a sequence of stimuli, and the task consists of indicating when the current stimulus matches the one from n steps earlier in the sequence. N can be adjusted to make the task more or less difficult. fMRI was employed to test that activity in the frontal cortex is related specifically to the extent to which the participants intends to retrieve a certain stimulus.

9. Know the importance of WM in human cognition and its relationship with mental health

Scores on working memory tasks are correlated with overall intelligence and grades in school. Scores on tests of working memory-especially the phonological loop-are usually correlated with reading ability. Scores on central executive tasks are correlated with verbal fluency, reading comprehension, reasoning ability, and note-taking skills. Christopher and MacDonald found that people with major depression had difficulty concentrating, and had a ruminative style. People with ADD or ADHD often have more difficulty than others on central-executive tasks.

Objectives: Chapter 5 LTM

1. What is long-term memory? How does long-term memory differ from short-term/ working memory?

Memory for experiences and information accumulates over your lifetime. Working memory is another other than currently processing. Does not mean it has to be a long time ago!

2. Know the two different types of explicit memory

Explicit: semantic and episodic

Implicit: procedural, priming, condition, habituation

3. What is the difference between recall and recognition

Recall: generating previously remembered information when the target is NOT in the current environment (an essay test, or Jeopardy)

Recognition: selecting previously remembered information from an array of options; the target IS present in the current environment (multiple choice tests)

4. Know the two principles of encoding process in LTM and how they affect to retrieval process in LTM: Levels of Processing / Encoding specificity

Shallowing encoding: little attention to meaning = worse recall

Deep encoding: better recall

Visual: what something looks like (capital letters)

acoustic: what something sounds like (does the word rhyme with MAT?)

*semantic: what something means (does the word refer to a plant?) **deeper processing*