Memory
Module 20
Information Processing

Objective's for Today's Class:
- Encoding memories
- Storing memories
- Retrieving memories

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Memory is learning that

_____

_____

It is information that has been

_____

_____

Memory is a *constructive process* through which we actively _____

_____

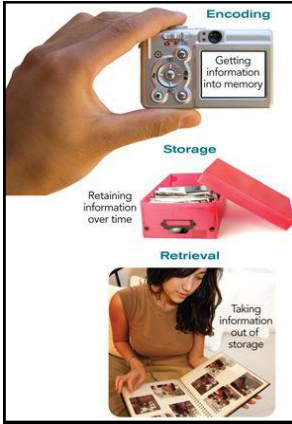Thinking and memory are flexible and capable of constant change...this can

_____

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Information processing model focuses on how information is cognitively organized

_____

_____

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The Study of Memory

* How does information get into memory?
  - _____

* How is information maintained in memory?
  - _____

* How is information pulled back out of memory?
  - _____ 5

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* *Encoding* is the _____ _____ so the brain can process it.
  - _____ _____

* Learners must _encode_ information to store it.

  - If encoding is successful we are able to retrieve the information from _storage._

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What did you say?

* Some information gets into memory
  _____
  _____

  - These include paying attention, processing deeply, elaborating, and using mental imagery.

* To begin the process of memory encoding, we have to pay _____

_____
_____
_____
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_____
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Attention

* *Divided attention* involves concentrating on more than one activity at the same time.

  - _____
    _____
    _____

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It is not unusual for students to divide their attention ("Multi-tasking") among homework, texting, web surfing, and looking at an iTunes playlist.

Research indicates that trying to listen to a lecture in class while simultaneously texting or playing a game on your cell phone is likely

_____
_____

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Another factor that influences memory is the degree to which we get involved with the information.

The term *levels of processing* _____
_____
_____
_____

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It suggests that memory relies on how

_____

_____

By adding meaning, developing organizations and associations, or relating it to things we already know, it can be stored for a lifetime.

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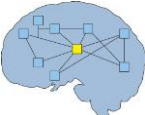
Parallel Distributed Processing (PDP)

The brain performs multiple, *parallel* operations all at once, allowing _____

_____
_____

Information Processing Model suggests that memory is very similar to a computer

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_____

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Limitations of the information processing model

* Memories are described as literal, "hard" data stored on a computer disk or hard drive.

_____
_____

* Also, computers process one piece of data at a time ,while human memory can

_____
_____
_____

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STORAGE:

Maintaining Information in Memory

~Three-Stage Memory Model

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Storage

* _Storage_ involves maintaining

  _____

  _____

  _____

  - Whenever people have access to
    information they no longer sense,
    memory is involved

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It's a memory when...

* Example – if you look up a phone
  number, go to the telephone, and dial
  the number then memory is involved –
  even if for only seconds.

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There are 3 Separate _Memory Stores_

* **Sensory Memory** performs the initial
  encoding of sensory information for a
  brief time, usually only a fraction of a
  second.

* _____

  _____

  _____

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People have a special capacity for briefly retaining

_____

_____

_____

This capacity is called the
Sensory Memory

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Sensory Memory

* _Iconic Memory_ is a _____
  _____

  - Capacity: 4 ± 2 bits of info

* _Echoic Memory_ is a momentary _____
  memory lasting no more _____

  - Capacity: about 6 bits of info

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Working memory is where _____

_____

- Computing solutions to math problems
- Allows you to comprehend what you are reading
- Figure out the meaning of what has just been said to your in a conversation.

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The working memory has many limitations

* Short-term memory is a <u>limited-capacity</u> store that can maintain _____

_____

* <u>Capacity</u>:
  - **"The magic number"** (George Miller)
  - _____
    _____

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* People can group information in ways to expand their short-term memory capacity.

  - "<u>Chunking</u>" allows for easier encoding

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How long can this information stay in STM?

* Memories disappear <u>unless</u>:
  - You continually <u>rehearse</u> them
  - They are really meaningful so they get stored quickly into long-term memory

* <u>*Rehearsal*</u>:
  - _____
    _____

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Long Term Memory

* An unlimited capacity store that can hold information over length periods of time
  - <u>Capacity</u>_____
  - <u>Duration</u>: _____

* Information can be stored in separate
  _____
  _____

  - *Tip of the tongue phenomenon* (temporarily inaccessible)

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Next class

How Do We Get Information Out of Memory?

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