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SLP Considerations post D/C: Attention & Memory

Attention



the cognitive process of selectively concentrating on one aspect of the environment while ignoring other things. <http://en.wikipedia.org/wiki/Attention>



the act or faculty of **attending**, especially by directing the mind to an object.



<http://dictionary.reference.com/browse/attention>

Types of Attention

Sustained Attention

Selective Attention

Focused Attention

Alternating/Shifting Attention

Divided Attention

Directed Attention

Sustained Attention

Ability to maintain a consistent behavioral response during continuous and repetitive activity

Sustained attention, or vigilance, as it is more often called, refers to the state in which attention must be **maintained over time**.

Maintain a certain level of attention in the absence of external motivation

The Ability to work on a particular task or train of thought over an extended period of time
www.northeastcenter.com

Behavior/Deficit in Sustained Attention

Impulsivity

Impulsivity (or impulsiveness) is characterized by the inclination of an individual to initiate behavior without adequate forethought as to the consequences of their actions. en.wikipedia.org/wiki/Impulsivity

Deficits in sustained attention may cause a great deal of frustration and agitation.

Vigilance is difficult to sustain.

www.britannica.com

Examples of Impulsivity

Standing abruptly,
without warning

Getting out of bed
without assistance

Pushing back in
wheelchair

Verbal impulsivity

Increased/rapid
rate of oral intake

Reaching for and
grabbing at items

Starting an activity
before receiving
clear directions

Stopping a task
and leaving it
unfinished due to a
thought/distraction

Removing clothes,
collars, helmets,
etc.

Selective Attention

is intentional attention.

giving attention to important things only: the ability to pay attention to those things that are considered important and to ignore those that are not <http://encarta.msn.com/dictionary>

The ability to maintain/sustain attention in spite of distracting or competing stimuli

The ability to respond to a stimulus in the presence of competing stimuli (Meritcare Health System 2006).

Behavior/Deficit in Selective Attention

Distractibility

- The ease with which a person's concentration can be interfered with by external stimulation or by irrelevant thoughts.
en.wiktionary.org/wiki/distractibility

Can your patient maintain attention???

Is he/she distracted by someone, something, thoughts, feelings, pain, etc.?

Focused Attention

The ability to discretely respond to specific visual, auditory, or tactile stimulation

- en.wikipedia.org/wiki/Attention

Willful act that requires a high level of awareness

Behavior/Deficit
in Focused
Attention

Perseveration

the tendency for a memory or idea to persist or recur without any apparent stimulus for it

- wordnetweb.princeton.edu/perl/webwn



We need to learn to recognize and learn to control deficits in focused attention.

Examples of Perseveration



Repeating phrases,
activities



Topic perseveration



Written
perseverations



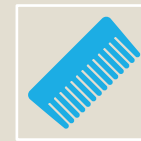
Drinking from an
empty cup,
scooping food from
empty plate/bowl



Persistent circling
objects on a page



Continuously
brushing teeth,
washing face/hands



Picking at stitches,
scabs, dry skin, etc.

Alternating/Shifting Attention

- The ability to perform tasks that require rapid switching from one response set to another.
 - www.consultwebs.com/legal_glossaries/brain_injury/brain_injur&hellip
 - Ability to shift the focus of attention and move between tasks with different cognitive requirements.
 - Requires good working memory for manipulation and mental flexibility
 - We need to shift attention or we will have difficulty functioning
 - The ability to move attention appropriately from one area to another
- www.northeastcenter.com

Divided Attention

The ability to respond simultaneously to multiple tasks or demands.

the ability to divide our attentional processing between more than one task

www.tuition.com.hk/psychology/d.htm

The process by which an individual can perform multiple non-automatic tasks at the same time

www.cognitiveatlas.org

Tasks involving more than one activity to be performed at once or multiple stimuli to be processed (Tompkins 1995).

Directed Attention

Components of sustained (maintain) and selective (vigilance) attention.

You must be able to maintain attention over time despite distracting/competing stimuli.

Ability to manage attention, to stop one response/action to say/do something else.

Stop this and Start that.

Safety Concerns



Falls



Choking, aspiration



Home safety concerns including burns, fires, falls, taking/managing medication, driving, etc.

Assessment of Attention



**Observation-recognize
what you see!**



Is the patient impulsive?



Does the patient
perseverate? Physical or
verbal perseverations?



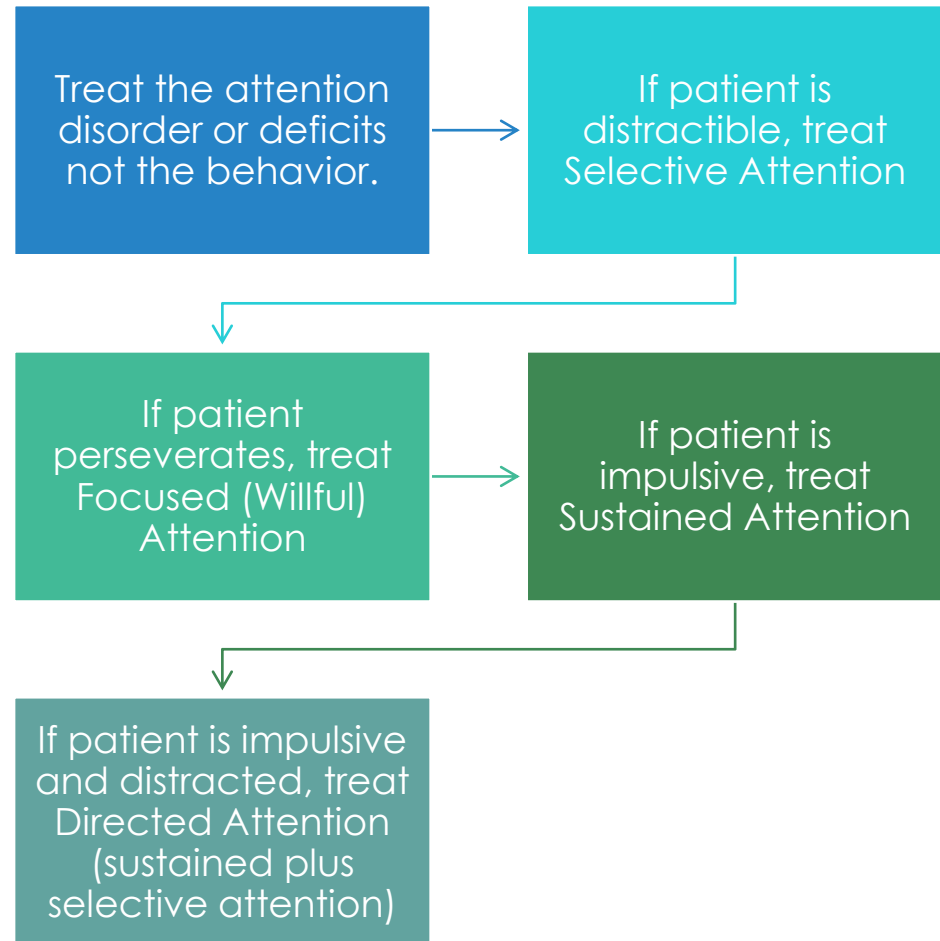
Is the patient
distracted/distractible?



Can the patient sustain
attention in the presence
of distraction? Can
he/she ignore
distractions?

- Can he/she initiate a task?
- Can he/she persist with a task?
- Can he/she perform multiple tasks and/or switch tasks effectively and efficiently?
- Can he/she engage in conversational turn taking and topic maintenance?
- Formal assessment (COGNISTAT)-repetition of digit sequences/sentences, following directions, etc.

Treatment of Attention



Treatment of Attention

Increase Arousal/Speed by increasing alertness and response time.



Environmental Adaptation/Modification or Anchors
(RED LINE)



Scanning Training (Anchoring, Pacing, Density)



Multi-context Treatment Approach (Identify processing strategy and practice in multiple environments/tasks).

Memory

- an organism's ability to store, retain, and recall information and experiences.
<http://en.wikipedia.org/wiki/Memory>



**Immediate
Memory**

Attention

Event

**Working
Memory**

Consolidation

Memory

**Long-Term
Memory**

MEMORY SYSTEMS

Types of Memory



Immediate
Memory/Attention



Short Term Memory



Working Memory



Long Term
Memory/Permanent
Memory

Immediate Memory/Attention

- Attention is the act or state of applying the mind to something.
<http://www.merriam-webster.com/dictionary/attention>
- Immediate memory is the ability to remember a small amount of information over a few seconds.
http://www.baycrest.org/MemoryandAging/Session_1/default_23.asp
- what you can repeat immediately after perceiving or receiving it
<http://www.thefreedictionary.com/immediate+memory>

HOW ATTENTION IMPACTS MEMORY

If you can't
pay attention
to it.....then
you can't
remember
it!!!!!!!!!!

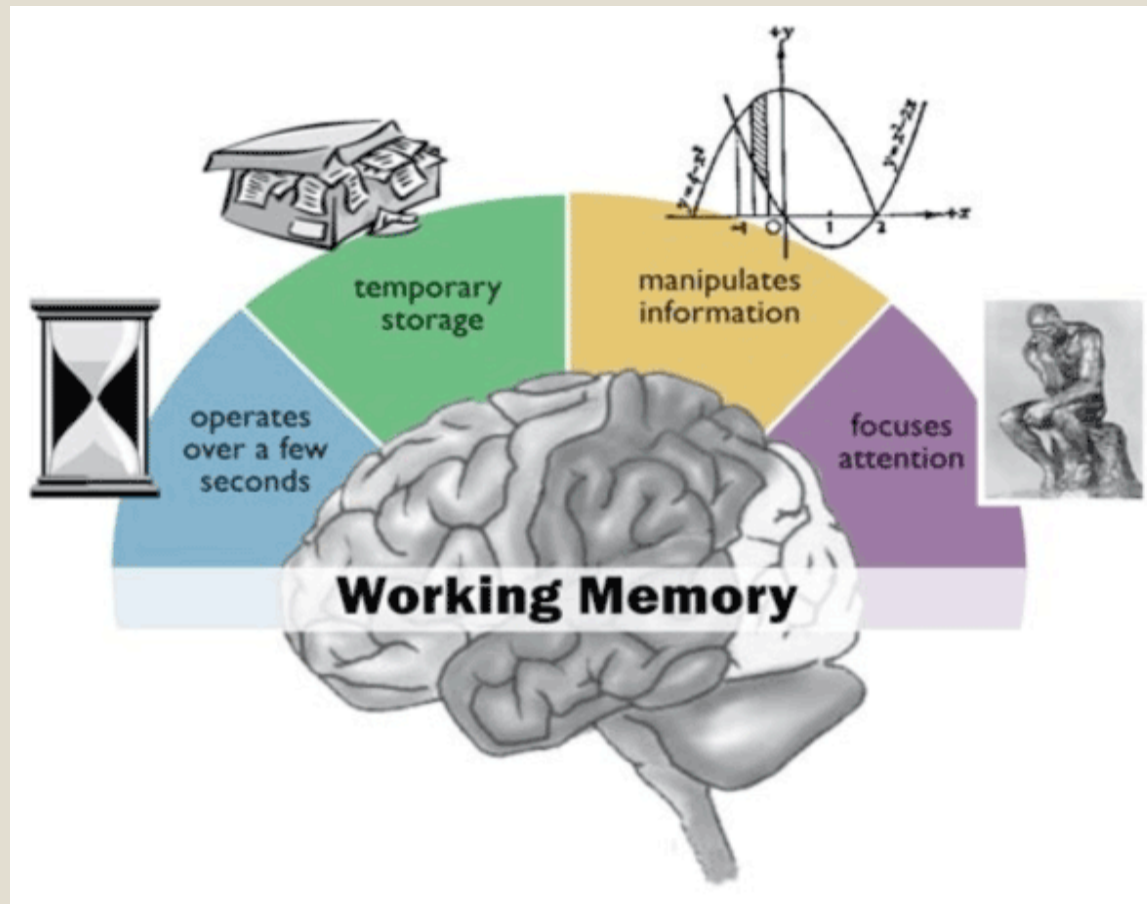
- **Short-term memory** (or "primary" or "active memory") is the capacity for holding a small amount of information in mind in an active, readily available state for a short period of time.
- **A commonly cited capacity is 7 ± 2 elements.**
http://en.wikipedia.org/wiki/Short-term_memory
- The information we are currently aware of or thinking about.
<http://psychology.about.com/od/memory/f/short-term-memory.htm>
- Reiteration

Short Term Memory

- The ability to actively hold information in the mind needed to do complex tasks such as reasoning, comprehension and learning.
http://en.wikipedia.org/wiki/Working_memory
- [working memory](http://en.wikipedia.org/wiki/Working_memory) refers to structures and processes used for temporarily storing and manipulating information
http://en.wikipedia.org/wiki/Short-term_memory
- Manipulation

Working Memory

Working Memory



- refers to the continuing storage of information.

<http://psychology.about.com/od/memory/f/long-term-memory.htm>

- A system for permanently storing, managing, and retrieving information for later use.

- Items of information stored as long-term memory may be available for a lifetime.

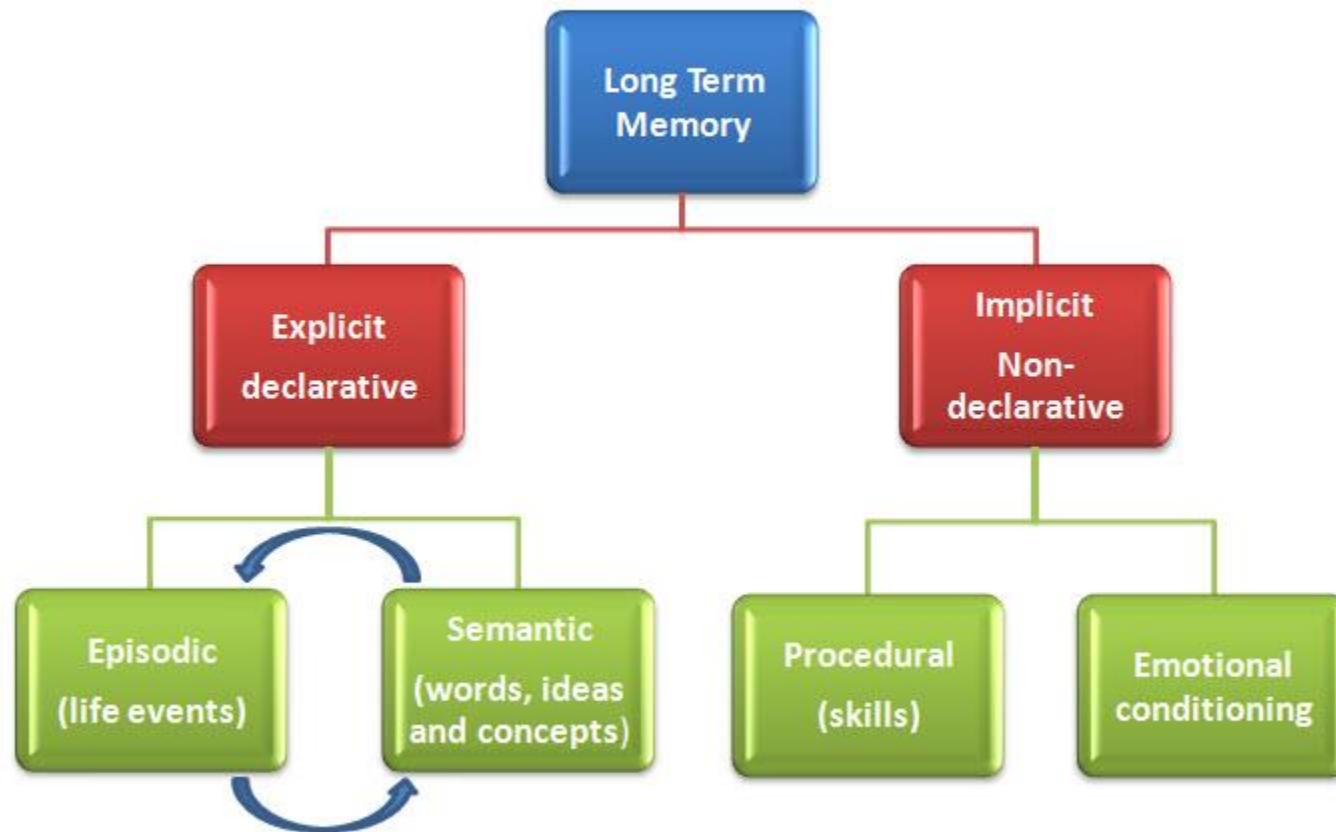
<http://www.medterms.com/script/main/art.asp?articlekey=15299>

Long Term/Permanent Memory

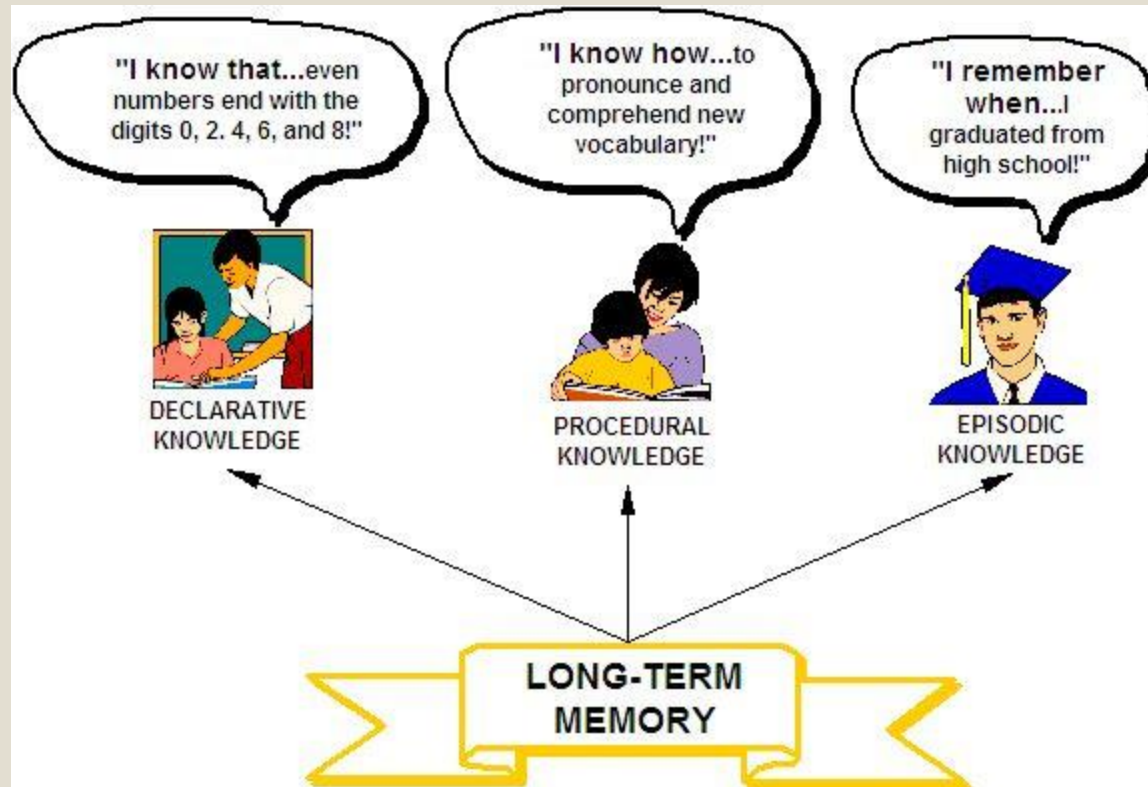
Long Term/Permanent Memory

- Declarative or Explicit memory (Conscious recall)
 - Semantic/Facts
 - Episodic/Events
- Non-Declarative or Implicit (Automatic without conscious awareness-memory without thinking)
 - Priming
 - Procedural (Motor Skills, Cognitive Procedures)
 - Habits

Long Term Memory



Long Term Memory



Assessing Memory



Is patient oriented? To person, place, time, situation, etc.?



Can patient recall daily events/activities and/or conversations?



Can patient remember people or recall requests/directions?



Does patient require repetitions of questions and/or directions?



Formal assessment (COGNISTAT)-repetition of digit sequences/sentences, following directions, word recall, visual recall/constructions, etc.

Treatment of Memory

Recall word lists by order/placement, function, category inclusion/exclusion, attributes, etc.

Functional memory for memos, appointments, directions, paragraph facts, etc.

Mental manipulations for math, reverse order, scrambled sentences, word progression, alphabetical order, ranking, etc.

Remember sentences or numbers, follow written and oral directions, paragraph retention.

**Spaced Retrieval-Memory technique;
Progressive periods of time**

**Errorless Learning-Strategy to reduce errors &
increase accuracy**

Internal Memory Strategies/Techniques

Pay attention, focus on what is being said.

Chunking or grouping (numbers, words, or sentences).

Repetition (repeat and rehearse).

Association.

Visualization.

External Memory Aids/Strategies

Adapt the environment.

A place for everything and everything in its place.

Have a routine.

Notebook, post-it notes (notes/memos), wall chart, dry-erase or wipe-off board.

Calendar, watch, cell phone.

Lists (shopping lists, telephone lists).

Pill organizer.

Timers

Executive Functioning



- An umbrella term for cognitive processes such as planning, working memory, attention, problem solving, verbal reasoning, inhibition, mental flexibility, multi-tasking, initiation and monitoring of actions.
http://en.wikipedia.org/wiki/Executive_functions
- Describes a set of cognitive abilities that control and regulate other abilities and behaviors.
- Executive functions are necessary for goal-directed behavior.
- They include the ability to initiate and stop actions, to monitor and change behavior as needed, and to plan future behavior when faced with novel tasks and situations.
- Executive functions allow us to anticipate outcomes and adapt to changing situations.
- The ability to form concepts and think abstractly are often considered components of executive function.

Read more: [Executive function - effects, person, people, used, brain, personality, skills, Definition](http://www.minddisorders.com/Del-Fi/Executive-function.html#ixzz1ZpEAdlX) <http://www.minddisorders.com/Del-Fi/Executive-function.html#ixzz1ZpEAdlX>

Creating & following a Plan

Time Awareness



Organization



THE COACH



Working Memory



Meta-cognition



Regulation of Attention

Treatment of Executive Functioning

Metacognitive Processes

Time Management

Attention

Plan-Execute-Repair

Memory

Metacognitive Processes



Think about thinking.



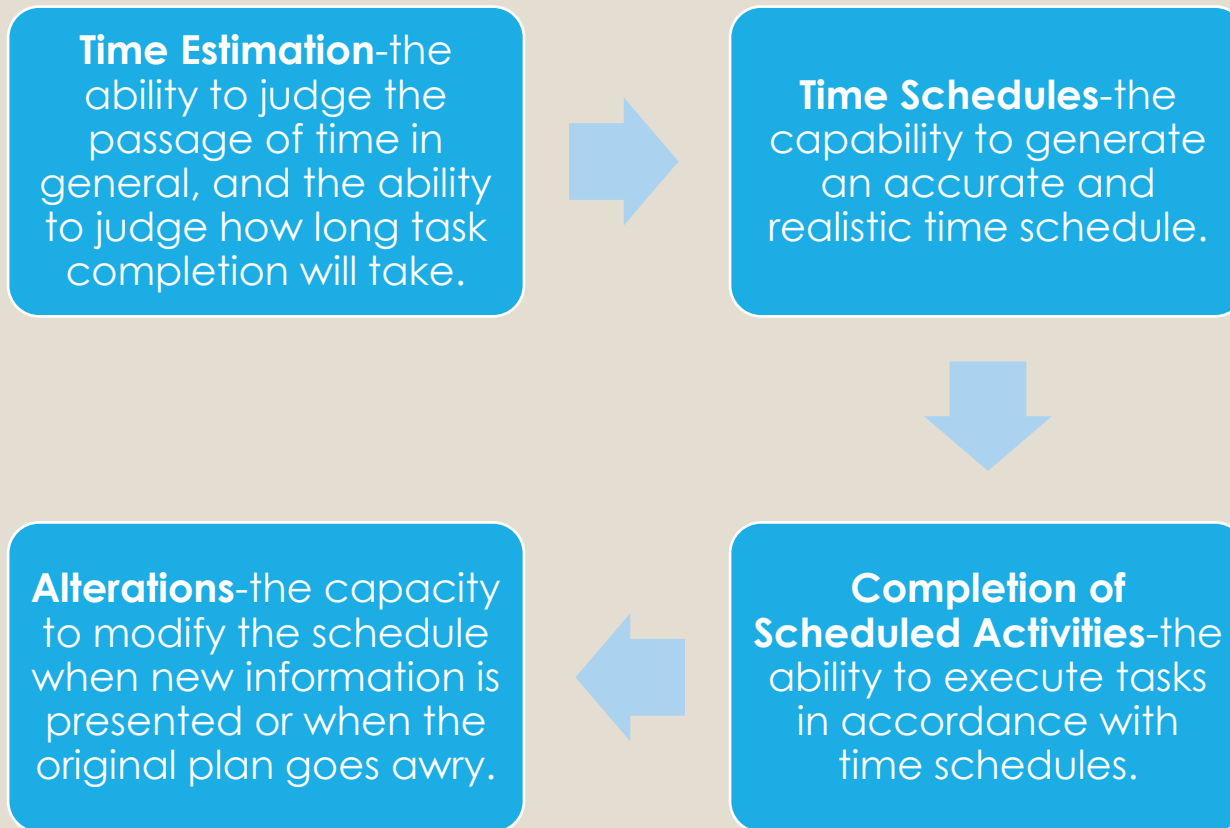
Think about *how* you think.



Discover,
rediscover
strategies.

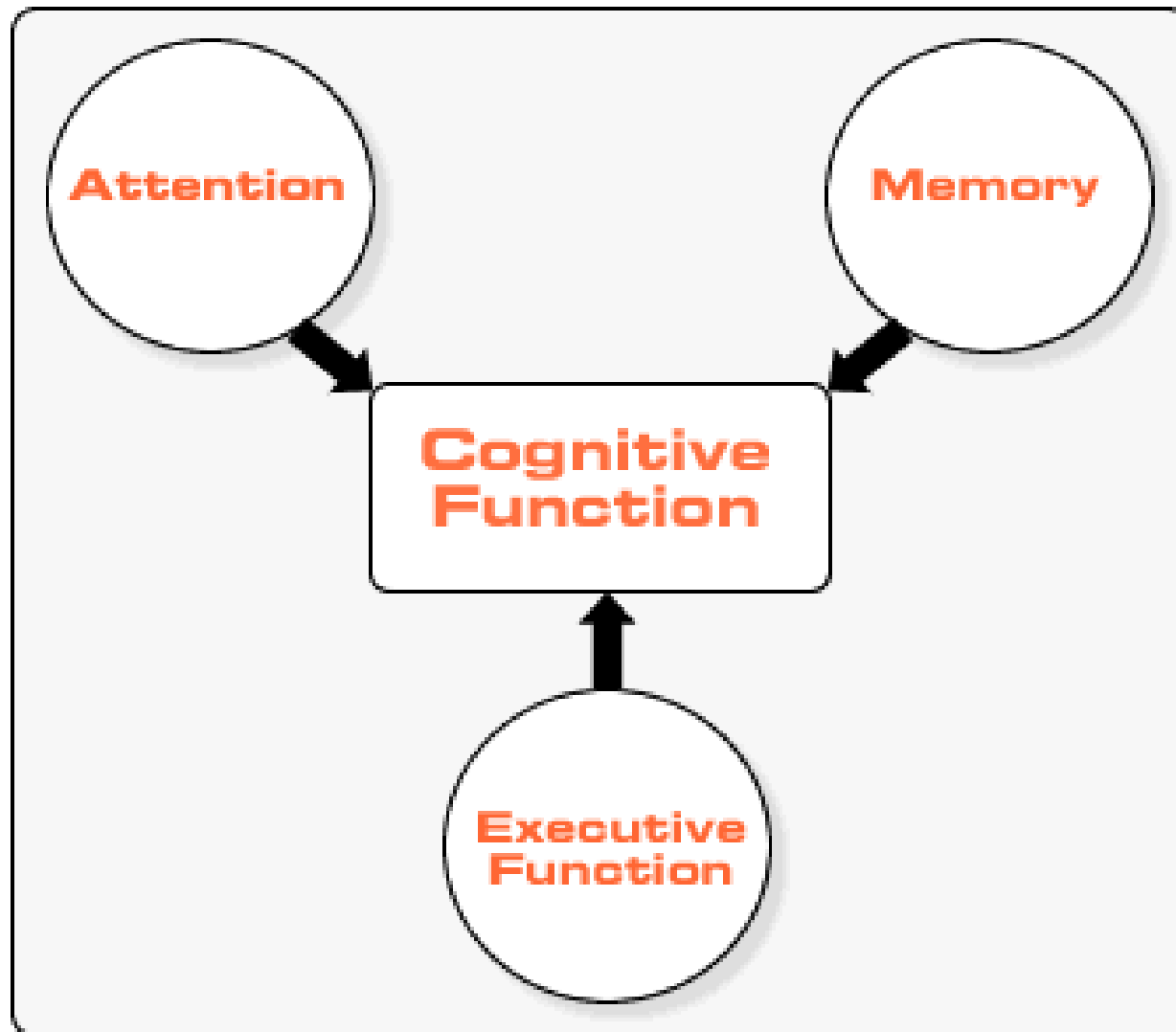
1. Describe the Strategy
2. Model the strategy's use.
3. Provide practice tasks.
4. Promote self-monitoring and evaluation.

Four Divisions of Time Management



- **Plan**
 - What am I trying to accomplish?
 - What are the necessary steps?
 - What is the sequence of these steps?
 - How long will each step take?
 - How and when do I start?
- **Execute**
 - How and when do I start?
 - How will I persevere with the task?
 - What could possibly go wrong?
- **Repair**
 - What could possibly go wrong?
 - How is my plan moving along?
Do I need to alter the plan?
 - How will I know when I'm finished?
 - What would I do differently next time?
 - What would I do the same next time?

Plan-
Execute-
Repair



Additional Considerations



Pain



Discomfort



Physical status



Psychosocial
Status/Concerns

Referrals/Recommendations

Vocational Rehabilitation
Counseling

Neuropsychological Testing
for return to school or work.

Driver Rehabilitation

Neuro Opthamologist

Psycho-social counseling
for adjustment

Additional Services Available at Upstate University Hospital

- Brain Injury Rehabilitation Program
- Outpatient Comprehensive Stroke Program
- Concussion Management Program
- Rehabilitation Psychology Program
- Wheelchair Seating Program
- Neuropsychological Testing
- Stroke Clinic
- Stroke Support Group

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