The Things I’ve Learned So Far

Retraining Cognition: Techniques and Applications

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The Research Agenda
Iconic Imagery

- Idea: Increase Iconic span of apprehension
- Training: Short duration flashes
- Result: Improved performance – evidence of carryover to reading
- Applications: Reading, driving, perceptions of warning signs
table and chair
what we all want

Where do we go from here?
Rehearsal Training

- Idea: Demonstrate effect of rehearsal and determine how many rehearsals are necessary
- Training: Card games for maintenance rehearsal
- Result: Improves memory so long as the person consciously rehearse.

References

Mnemonics and Imagery

- Idea: Facilitate cuing and memory retrieval
- Training: Provide or develop memory cues
- Result: Unique mnemonics that solve a specific problem work best
- Applications: Work, ADLs, Academics, Training.

References


The Memory TRRAP

- Translate into your own words
- Rehearse immediately
- Relate the new to the old
- A picture is worth a thousand words
- Practice output
Remembering names

- Notice the person – maintain eye contact
- Ask the person to repeat his or her name
- Mention the name in conversation
- Exaggerate some special feature

Examples of Working Memory Exercises

- Making change mentally
- Solving anagrams
- Estimating costs and benefits
- Playing logical memory rehearsal game
- Scenario generation game

Cognitive Mnemonics

- SOLVE
  - Specify the Problem
  - Options
  - Listen to others advice
  - Vary the solution
  - Evaluate the result
- LISTEN
  - Look at the person
  - Interest in the conversation
  - Speak less than half the time
  - Try not to interrupt or change topic
  - Evaluate what is said
  - Notice body language
Decision Making

Do not procrastinate – Decide to begin
Evaluate your options – choose those that are WIN-WIN
Create new options when others won’t do
Investigate existing policies – limit what you choose
Discuss the decision with others – listen to their advice
Evaluate your feelings – before acting think twice

Incidental Learning

Idea: Learning without awareness
Training: Posters, Computer Reminding Software, Screen Savers
Result: Learning occurs within an hour
Applications: Screen savers for teaching memory and social skills, posters around the home, Auditory reminders for cuing medications.

How To Listen

Look at the person
Interest in the conversation
Speak less than half the time
Try not to interrupt or change topic
Evaluate - question
Notice body language
Incentive and Memory

- Idea: Incentives dramatically improve cognitive performance
- Training: Provide money or personally relevant reinforcers to stimulate performance.
- Result: Monetary incentives facilitate storage and retrieval of information in memory.

How To Control Anger

A anticipate the signs of anger
N ever act in anger
G et away from what anger you
E valuate what made you angry
R eview how you coped

How To Remember Names and Faces

N otice the person
A sk them to repeat their name
M ention the name in conversation
E xaggerate some special feature
Using Incentives
- Discover client’s current needs and interests
- Manipulated social relationships
- Direct payment
- Addictions as an incentive
- Create goals and chart progress
- Make incentives believable and feasible to achieve.
- Contingency management.

Social Skills Training
- Idea: Practice appropriate social behavior
- Training: Voice inflections, facial expression, body language, time management, social memory
- Result: Improved social acceptance
- Applications: Family, work, training.

References
Making yourself clear
Listening
Eye contact
Controlling Anger
Controlling Impulses
Solving problems
Making Decisions

Retraining Listening Skills
- Look at the person
- Interest in the conversation
- Speak less than half the time
- Try not to interrupt or change topic
- Evaluate what is said
- Notice body language

Listening Skills
- Listening is the social grace
- Of hearing the words and watching the face
- Good listeners speak less than half the time
- They evaluate the reason and the rhyme
- So open your eyes and close your mouth
- Study the face east-west-north-and south
- Listening is both a skill and a choice
- Choose not to hear the sound of your own voice.
**Eye Contact**

- Maintain eye contact when you speak
- Eye contact tells others that you are not meek
- Notice changes in posture and face
- These signal disgust, awkwardness, or even disgrace
- Study the details of the body and face
- Remember, eye contact is a big part of social grace.

**Controlling Anger**

- Anticipate those things that trigger your rage
- Never act in anger – act your age
- Go through the CALM sequence – return assuaged
- Evaluate the situation in retrospect
- Review how you coped - reflect

**CALM sequence**

- Call someone you know
- Allow your emotions to flow
- Leave the situation – avoid the fray
- Move about – get out of anger’s way
**Controlling Impulses**

Does what I want to do or say create more problems than it solves?
This question will make you think, of all that is involved.
It quells the impulse, soothes the urge, it makes you think and wait.
Now ask the right question, while you hesitate.
Does what I want to do or say solve more problems than it creates?
If it does then do it – but if it does not then don’t
If you follow this simple rule, then the things you want will happen - and the things you don’t want – won’t

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**Psychosocial Memory Skills Training**

- Remembering to remember others
- Prosthetic reminders of important dates.
- Sending cards for special events
- Remembering likes and dislikes
- Remembering what not to do or say

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**Prosthetic Devices**

- Idea: Provide a device that obviates the memory or cognitive problem
- Training: Set up the device for the client and teach him or her to use it.
- Result: Immediate resolution of the problem.
- Applications: Memory and routine cognitive processing.
Use Prosthetic Devices
- Digital recorders
- Personal Organizers (e.g., Palm Pilot)
- Timex/Microsoft watch
- Sticky note pads
- Personal signs
- Appointment calendars
- Automatic bill payment
- Device controllers for the home
- Cognitive Art

Cognitive Art
- Make therapy conspicuous
- Mug designs
- Screen savers
- T-shirts
- Posters
- Artistic creations
- Poetry therapy

Neurotraining
- Idea: Train concentration via biofeedback
- Training: Biofeedback or EEG devices
- Result: Task teaches client what it feels like to concentrate
- Application: ADD training, memory training, sustained vigilance.
What Is Neurotherapy

- EEG and biofeedback monitoring
- Client learns to recognize specific EEG patterns
- EEG or biofeedback correlated with performance

http://www.wilddivine.com/

http://www.playattention.com/
Applications

- Seizure control
- ADHD
- Substance abuse
- Anxiety disorders
- Mood disorders
- Memory training

Efficacy

- Generally positive findings
- Generally efficacious for seizure control
- Few class 1 studies
- Few standardized measures or paradigms

Issues

- Still in experimental stages
- Efficacy similar to CRT – Generalization?
- Insurance reimbursement issues
- Training for therapists
- Equipment availability
Evaluation
- Clients can learn to control EEG and Physiology
- Cognition correlated with EEG
- Equipment relatively inexpensive
- Efficacy not yet established
- No standard treatment models
- Equipment not generally available

Summary
What Works and What Doesn’t

What Works
- Gradual step-by-step therapy
- Eclectic treatment
- Prosthetic devices
- Academic remediation
- Functional skills training
What Works - continued

- Individualized mnemonics
- Changing life-long habits
- Creating incentives and personal relevance of treatment
- Using clients to council clients

What Works - continued

- Rehearsal training
- Group therapy
- Social skills integration training
- Nonverbal perception
- Concept communication
- Psychosocial memory skills

What Does not Work

- Doing nothing
- Short-term treatment
- Most stimulation therapies
- Most insight oriented psychotherapies
- Forcing clients to do things your way
The Art of Cognitive Rehabilitation

- Creating appropriate incentives and personal relevance
- Translating what the client should do into what they want to do
- Client centered treatment
- Creativity – flexibility-improvisation