

Quantum Learning[®]

MENTAL FLOSS... BREAKTHROUGHS FOR ADULT LEARNERS



National College Transition Network
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Keynote

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Quantum Learning[®]
education

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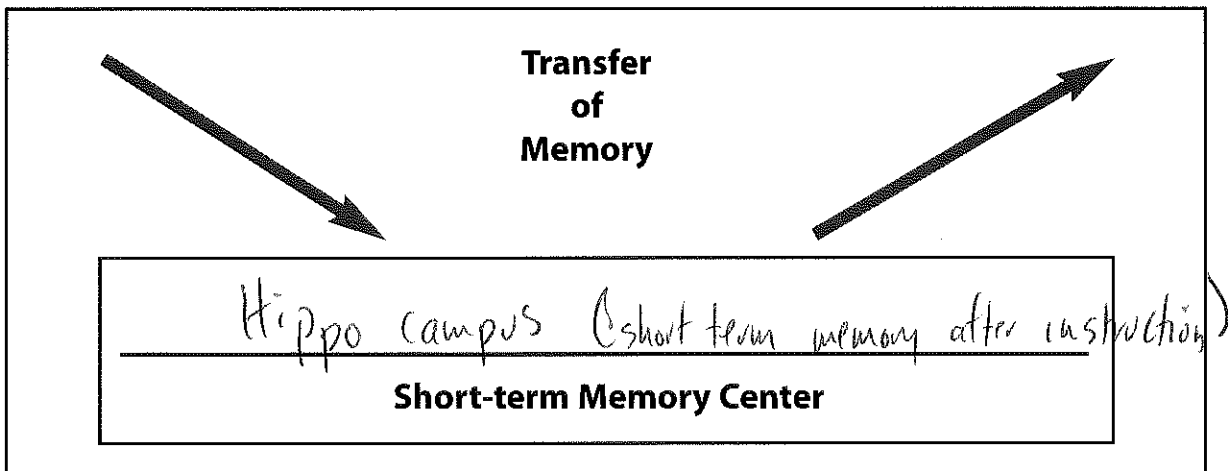
Brainwave States and the Transfer of Memory

B eta	Divided Focus	12-150	waves per second
A lpha	Relaxed Alert Focused	8-12	
T heta	(Rem sleep, Dreams) Processing Sleep	4-8	Short term moves to long term
D elta	Deep Sleep	6-4 cycles	

Brainwaves are electrical waves and can be measured using an instrument called an electroencephalograph. The instrument measures the electrical activity of the cerebral cortex, which is the very outer portion of the brain where higher order thinking occurs. An understanding of brainwave states gives educators insights into some very important educational strategies.

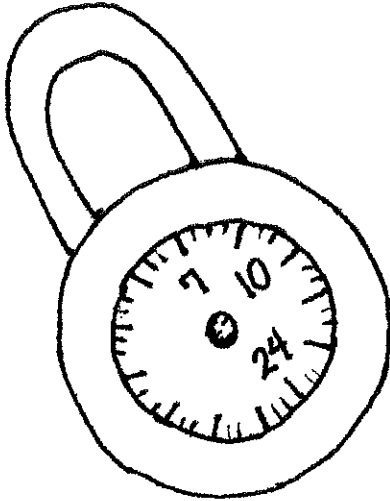
We also explored how memory is transferred from short-term to long-term memory and discovered that these two kinds of memory are not stored in the same place in the brain. There are effective strategies that teachers and students can use to maximize the probability that this transfer occurs properly. Our understanding of this relationship helps us to better orchestrate the transfer of short term memory and the consolidation of long-term memory.

time right before sleep 4 minutes important to processing (theta scan)



10-24-7

Reinforcement Protocol

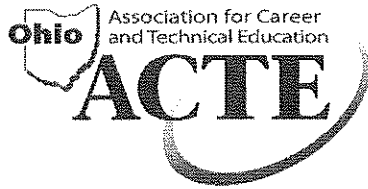


- 10** minute window (fire electricity over ^{constant reinforcement of curriculum} ^{new} info)
- 24** hours (important to review ^{begin to transfer information})
- 7** day window (reinforce content to make sure "transfer" occurs)

In the conference session we learned the 10-24-7 protocol for reinforcement based on the latest breakthroughs in neuroscience and cognitive science. This answers the question, "How many times do we need to fire electricity over a newly formed neural network to ensure that it gets transferred to long-term memory. There are many strategies we can teach our students and use in instruction that are effective for reinforcement. Below is a list of some examples to help us get started.

- Teacher Recaps
- Random Recaps
- See-Say-Do Reviews
- Homefun
- Circuit Learning
- Gallery Walks
- Theta Scans

- Partner Recaps
- Summary Reviews
- Learning Diagrams
- Content Mapping
- Fast Forward
- Gallery Scans
- Standing Down Strolls



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Audience Profile

2009 Ohio ACTE All-Ohio Conference
July 26-28, 2009
Hyatt Regency – Columbus, OH

We want to help you better prepare for the presentation at the All-Ohio Conference. We expect 600+ attendees at the 2009 Conference. Sessions are self-selected so there is NO guarantee on number of attendees for each session.

Ohio ACTE Members include: Administrators, Educators, Instructors, Teachers, Support Staff, ABLE/OAACE Instructors, Ohio Department of Education Staff, Ohio Board of Regents Staff, Community Colleges, Private Universities, Government Agencies, Community Partners, and many others!

The following information was collected during the 2008 All-Ohio Conference.

Institution Type:

- Secondary Career/Technical School - 100 Responses, 76.9%
- Comprehensive/Compact High School - 19 Responses, 14.6%
- Two Year College - 4 Responses, 3.1%
- Federal/State/Local Educational Agency - 2 Responses, 1.5%
- Four Year College or University - 5 Responses, 3.8%

Position:

- Administrator/Supervisor - 67 Responses, 52.3%
- Counselor - 3 Responses, 2.3%
- Teacher - 45 Responses, 35.2%
- Teacher Educator - 6 Responses, 4.7%
- State/Local Agency Employee - 4 Responses, 3.1%
- Board Member - 3 Responses, 2.3%

Age:

- 25-35 years of age - 11 Responses, 8.1%
- 36-40 years of age - 9 Responses, 6.6%
- 41- 50 years of age - 40 Responses, 29.4%
- 51 - 65 years of age - 74 Responses, 54.4%
- Over 65 years of age - 2 Responses, 1.5%

Location:

- Cincinnati - 17 Responses, 13.8%
- Cleveland - 12 Responses, 9.8%
- Columbus/Central Ohio - 28 Responses, 22.8%
- Dayton - 12 Responses, 9.8%
- Northeast Ohio - 27 Responses, 22.0%
- Northwest Ohio - 18 Responses, 14.6%
- Southern Ohio - 9 Responses, 7.3%