CHANGING LIVES

SINGAPORE BRAIN DEVELOPMENT CENTRE

Changing lives, unleashing fullest potential.

>> All About Unleashing Your Child's True Learning Potential

November 2007

Elephantine Memory

3 simple techinques to develop great memory

READ FASTER, UNDERSTAND BETTER

Introducing the SQ3R Method

"$10.1 billion budget", "Future-schools" & other news

Learning Preference

Are you Visual, Auditory or Kinesthetic?

From the Editor's Desk

Welcome back to another issue of Changing Lives!

This day is truly the Age of wisdom as coined by Stephen Covey in his book, 'The 8th Habit'

Brain Age™, a popular game designed by Nintendo and played on its popular gaming platform, Nintendo DS, is now into Version 2 and has sold 30 million copies till June this year.

Through Neural Mapping, it is now possible to detect anomalies of the brain in mental activities and pinpoint exactly the parts of the brain that needs intervention training. For example, a child who has problem reading may go for Neural Mapping to confirm little or no activities in the occipital lobe, hippocampus and frontal lobe - areas of the brain strongly associated with reading - and be given immediate intervention therapy MINUS the guesswork.

Through the constant efforts of Professor David Snowdon – a world expert in mental diseases related with old age - in his Nun Study (so coined because it involves nuns in their daily activities), we now have stronger scientific proof than ever before, that age-related mental diseases like Alzheimer's', Parkinson's', dementia can be delayed and even allayed.

Latest development in the field of early childhood development has also revealed exciting findings. Children's mental development can be accelerated in an early age, in as young as 2 years old in a combination of games and exercises that involved them in using their sensory motor skills. This primarily trains their spatial skills – awareness of their surroundings in depth (how far), field (how wide) and order (in what sequence) – and lays the foundation of lower cognitive skills in later years. Occipital therapists can also intervene early if a child is observed to display difficulties in say, fixing a square block into its peg.

We are truly moving into the Age of Wisdom. In the meantime, mahjong has also lend itself well in keeping old minds agile and spontaneous through a qualitative study done on my grandmother who still displays a sharp wit. Perhaps I shall consider sponsoring a study on the effects this favoured game has on the brain.

In recognition of these findings, this issue is dedicated to the application of learning strategies that have been evolved out of our understanding of how the brain works. Some has been nothing than a simple exercise; others have proven its mantle and have stood the test of time and the light shed by latest neuroscience research. We will introduce to you only those which Singapore Brain Development Centre has tried and found to be true, tested and proven effective.

In the meantime, keep yourself mentally active. Try different activities, switch your daily routine and give yourself challenges to overcome. Nothing beats a well-trained brain. It is, after all, the source of our feelings, thoughts, actions and memories anyway.

Elite Wee
Editor-in-chief,
November '07

Newsbytes

Singapore graded as having one of top five education systems in the world

A Mckinsey report lifted from The Economist graded Singapore as having one of top five education system in the world together with Finland, Korea, Japan and Canada.

These countries have education systems marked by these two policies:

Hiring the best teachers and training them regularly and consistently

With a budget of 10.1 billion dollars this year and increasing every year, it is no wonder that our teachers are some of the best trained and well-remunerated in this region.

ICT as the focus

There are now Futureschools – spearheading the implementation of ICT Masterplan II in 2002. To take a leaf from MOE's website:

"They will lead the way for other schools in providing possible models for the seamless and pervasive integration of ICT into the curriculum for engaged learning in schools."

These schools aim to use technology as a learning tool to help teachers guide students, not as domain experts but as facilitators of learning, with students taking responsibilities of their learning, supporting the national policy of '*Teach Less, Learn More*'.

Normal Stream (40% of all Secondary 1 Students) pupils will have more resources marshaled to meet their learning needs

There will be an extra department and HOD, to further meet the needs of these students. They are recognized as having a different learning need; unlike the usual visual and auditory learners found in express streams, these students need to find room for more hands-on activities of learning.

Hence, an extra Education Associate (diploma holders) is to be paired with a full-fledged teacher in these Normal Stream classes.

Some further changes include:

1. Starting from 2009, they will not have any cap taking 'O' Level subjects in Secondary 4.

2. To start from this year, if they do well in 'N' Level, they are entitled to starting a course at Higher Nitec in ITE, skipping one year.

3. From 2009 onwards, new variants of subjects for pilot schools including: Mechatronics & Robotics, Electrical Technology & Applications, Computer Networking, as well as Business and Health Science.

CHANGE

Changing Minds, Changing Lives.

Since our inception in 2000, Singapore Brain Development Centre has spared no efforts in its research in discovering better brain training techniques to uncover the cognitive (some call it mental or learning; it means the same thing) potential of the human mind. Our work has invariably crossed over to the chasm of Learning Strategies, popularly purported by several established educational training companies in Singapore.

We have discovered that though some has its roots based solidly on how the brain works, (memorizing through visual imageries as the mind remembers images better) others are nothing more than smart exam revision strategies that ranked similarly as a common sense approach to studying.

These learning strategies or accelerated learning techniques are not cloaked in some secretive veil or surrounded by an air of mystique. In fact, they fit right into the pedagogy that learning needs to be fun, engaging, success-oriented and individualized. These accelerated brain-friendly learning approaches, we hope, can prove invaluable in helping to accelerate your child's continual quest for learning.

They are 3 Accelerated Learning Approaches in total:

- Learning Preference,
- Reading,
- Memory

Each of these 6 Accelerated Learning Approach has an activity that you may do with your child to help him/her practice. Practice makes perfect.

Enjoy.

Learning Strategy 1 - Learning Preferences

The outside world is perceived by our brain through all of our five senses, but we also have a preference for how we recreate and make sense of that information.

For some individuals it will be a ***visual*** preference, for others ***auditory*** and for others ***kinesthetic***.

To learn effectively we need to have information presented to us in ways that match our preference. Students will be more able to revise effectively if they are aware of their preferred learning preferences, while understanding that effective revision engages all the senses.

If you have a visual preference then you will find it easy to build up mental pictures. You readily 'see' yourself operating in different contexts. You'll see images associated with words or feelings and they will affirm your understanding of new information only when you see it happen or see it written or described visually. When spelling you may 'see' the word as you are about to write it out.

If you have an auditory preference, it is expressed through a preference for internal dialogue and through language generally. You may 'hear' the word spelled out before writing it. In anticipating a new situation, you may have a mental rehearsal of what will be said by and to you.

With a kinesthetic preference you will often use strong emotional attachments. In spelling a word you may feel yourself writing it letter by letter beforehand or it may simply feel right.

Let's do a short activity to see which learning preference you have. Simply circle 'V', 'A' or 'K' for the questions below.

When describing an object, for example your front door, would you...

Visual. Picture it in your mind

Auditory. Describe it with words

Kinesthetic. Think how it feels, sounds, opens etc.

When you are learning, do you prefer...

V. Work that is written down in many colours

A. Listen to a person talking or give instructions

K. Participating in activities, making or doing

When you do leisure activities, do you prefer to...

V. Watch TV, read, play on a computer

A. Listening to music

K. Play sports and games

When you are talking, do u...

V. Talk little and are reluctant to listen for too long

A. Like to listen and talk as well

K. Talk with you hands and gesture

When you receive praise or a reward, do you prefer to...

V. Receive a written note or certificate

A. Hear it said to you

K. Be given a pat on the back or a handshake

When you think about spelling a word, do you...

V. See the word

A. Sound the word out

K. Write the word down to see if it looks right

When you are really concentrating, are you distracted by...

V. Messiness/untidiness

A. Noise/talking/music

K. Movement

When you recall specific incidents, do you...

V. Do it with pictures/images

A. Sounds

K. See moving pictures

When you are angry, do you...

V. Remain silent, but seethe inside

A. Shout loudly

K. Clench your fists, grit

When you forget an incident that has happened or a person you've met, do you...

V. Forget names but remember faces

A. Forget faces but remember names

K. Remember only where you were and what you did

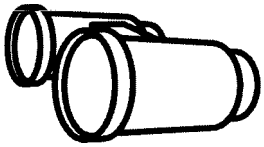
Score (highest score indicate learning preference)

Total Number of Vs _____

Total Number of As _____

Total Number of Ks _____

Now, get your child to do this activity as well!

IF YOU ARE	TRY
 VISUAL	• The Use of yourself and your body movements • Utilizing the visual display opportunities above eye level within the room • Keywords displayed around the room • Memory mapping, collage and visual note-taking tools • Lively and engaging textbooks • Video, OHP, slides, flip chart, coloured board markers or chalk
 AUDITORY	• Paired and group discussion, group reviews • Guest speakers • Mini-debates • Raps, rhyme, chants and verse, dramatic readings • Tapes, sound-bites • Mnemonics, onomatopoeia • Music for energizing, relaxing, visualising and review
 KINESTHETIC	• Body sculpture, mime • Gestures or movements learnt to demonstrate a concept • Break-state activities • Design-and-build activities • Field trips and visits • Physical movement - for example, Brownian Motion, demonstrated by students bumping together in a confined space, maps drawn on areas to help learn countries and trade routes

Learning Strategy 2 – Speed Reading

Our brain can do many things at once. It can take in a range of different stimuli from lots of different sources. It is a parallel processor, using left and right sides of the brain at the same time. It also processes parts and wholes at the same time. Plus, it likes to be aware of the Big Picture while focusing on the small steps it needs to take to get there. Your brain automatically focuses on what it knows, but at the same time will be searching for things that are new.

This has several implications:

Reading uses WHOLE BRAIN. As much as we try to read between details, we also grasp text in its universal meaning. Form and function. Macro and micro. Depth and breadth. In whichever way we put it, reading requires the best of us in using *both* the creative *and* the logical side of our thinking brain.

When reading is done this way, it *aids* comprehension as the brain relishes whole-picture thinking, we connect the dots of what we know to what the writer of the text we are reading is trying to tell us and we form a better picture. The more dots (the more connections we made with what we know) the better our clarity of the picture that is painted by the story. Simple?

Furthermore, the brain is itself a brilliant information seeking machine. It seeks to fill in information gaps when there are missing details. Hence, we are relying on our most pattern-making brain when we think of what we know *first* before reading the details of the text. Speed Reading therefore, given the above, is not rocket science. A very useful and highly effective technique to utilize the power of the brain in speed reading is **SQ3R Method**.

<u>The SQ3R Method</u>

THEORY	**PRACTICE**
S = Skim Skim through the passage quickly	Write down the theme, title, topic sentences and the words in bold and italics
Q = Question Ask questions about the text	What do I already know? What do I wish to find out?
R = Read Read for detail	Highlight the 5W1H from the entire text. (*Remember 5W1H –* *'Who', 'What, 'When', 'Why', 'When' & 'How'*)
R = Respond Respond to the questions	Answer the questions
R = Review Review what you have just read	Have the questions been easily & quickly answered?

Learning Strategy 3 – Elephantine Memory

Elephants are the largest land mammal on Earth, weighing up to 12,000 kg! Under that mammoth bulk lays a gentle heart for they are peaceful, with no known natural predators and are totally herbivorous. They also work closely with humans as beasts of burden, clearing jungles, carrying logs and sundries.

They also have amazing memory – the mother elephant can remember where all the waterholes that have been visited, hundreds of miles away, decades ago! This comes in handy as the giant beasts are a nomadic lot, foraging thousands of miles in the Savanna in search of greener pastures; the saying, 'looking for greener pastures', applies none so more appropriately than on elephants!

The human brain is similar in this regard, as long as we observe, again, several known facts about how the brain locks in memory.

Your memory is the ability to understand, store and recall information and all learning depends upon it. When students say, "I don't know how to revise", they often mean that they're not sure how to work so they can remember things. Simple memory techniques are relatively easy to learn and can help to give students an immediate feeling of success and achievement, which can impact on their future exam success.

Your brain will disregard what it doesn't need. Around 70 per cent of what you learn in a day is gone in 24 hours - unless you intend to remember it and practise it. To improve your memory you need to create associations between things and stronger pathways from your senses to what you need to remember.

There are three sorts of memory:

1. **Immediate memory** - this holds information for a few seconds or passes it on to your:

2. **Short-term or working memory** - this can hold about seven items at one time. If information is not rehearsed immediately, or seen in your head, it will be forgotten in 30 seconds. It sifts, rejects or selects information to go into the:

3. **Long-term memory** - this is the storage system; it holds millions of pieces of data. You have several long-term memories - including visual memory, for what you see, an auditory memory for what you hear and a motor memory for what you do.

As you know, our five senses are our learning channels -we can all remember past events by recalling the smell, touch, taste, sound and vision of something. We store memory coming from all our senses. Some people prefer to learn trough their visual channel because they have strong connections to their visual memory. Others prefer to learn through their auditory or hearing channel because they have a good connection to their auditory memory, and others learn best by doing because they have good motor memory. However, by learning in a multi-sensory way, taking information on through all our senses, we can all make learning and remembering easier.

Remembering Words through Linking, Categorizing and Story Telling

This is memory at its very best as we remember through all our three channels of visual, auditory and kinesthetic.

Categorizing – remembering things in one particular group

Linking – linking words/facts/figures to form patterns

Story Telling – Visualizing as if we are watching it happening as a mental movie.

Try memorizing these words:

1. Rice
2. Church
3. Fifty
4. Plane
5. Five
6. Chips
7. Hot air balloon
8. Pizza
9. Fifteen
10. Curry
11. Bicycle
12. University
13. Burgers
14. Yacht
15. Biscuits
16. Ten
17. Cinema
18. Train
19. Five hundred
20. Ferry

Difficult? Now apply Elephantine Memory Strategies:

1. **Categorizing these words, we can see that there are four main categories:**

   Buildings, transport, food and numbers.

2. **Link the words together:**

   Restaurant Curry Rice Chips, Fifty Five Plane and Hot Air Balloon near the *Church.*

3. **Tell a story:**

   Touring after **university**, I went to a **Restaurant** selling **Curry Rice Chips**, when I caught a show in a **cinema**. The **train, ferry, yacht, plane** and **hot air balloon** I had taken had brought me to this town. Food was aplenty, with **pizza** and **burger** joints. Food costs in denominations of fives - from **five, fifteen to fifty dollars**! I **bicycled** around the town before entering a **church** and offered a **biscuit**. How much? I asked. For **five hundred dollars**!