BRAIN WARE-AN EMERGING FIELD

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Abstract - Software and hardware are primarily based on brain-ware, so we need to brush up our brain-ware first. This is an emerging field of computer science that studies the functioning of human brain that also works like a computer. The most significant power of brain is memory. The human memory has trillions of neurons and each neuron is more powerful than any supercomputer ever developed both in the field of data storage capacity and processing speed .If we accumulate all the supercomputers of the world in a hall and connect them in parallel; still than they cannot match human brain in any aspect. Due to all these reasons, the field of brain-ware has been discussed and researched upon a lot in the past few years, so that, by understanding the working and principles of human brain, better computers can be developed. But due to our ignorance about how to utilize the full potential of brain, we are wasting such a great gift granted to us by God. This paper deals with the basic principles that drive brain, along with suggesting some powerful techniques and by employing these techniques, one can surely take a huge leap towards realizing the true potential of human brain.

Keywords : Brain,Memory,Neuron

INTRODUCTION

God has gifted us the invaluable equipment called brain, but we are ignorant to use the potential of the brain effectively. Our brain, a fist full 1.4 kg lump of wrinkled tissue with no moving parts, no joints or valves, not only serves as the motherboard for all other body systems but, is also the place for our mind, thoughts, and senses. It is also a place for all our emotions, joys, and thought processes. Through the master gland pituitary, the brain controls the hormonal activity of the whole body. It is indeed a super computer, best that a man can ever think of. As it is our most valuable possession, it needs to be taken care. Most of us use only 2% of the capacity of the brain; the more we use it, the more it grows; by using more synaptic connections conducive to the growth of boutons / dendrites. There is an old saying "use it or lose it."

There is no limit to the power of human mind. The more concentrated it is, the more power is brought to bear on one point, this is the secret. You will learn from this article to effectively use your God gifted equipments.

The need of the hour is to recognize our unused and hidden capabilities. The most preponderant power of the brain is concentration power. If you have strong concentration power then not only temporal, but you can also achieve what is eternal. This Power is based upon the power of thoughts which is also called our belief system. You can make every impossible task possible by strengthening your belief system.

According to our Vedas, Memory is a vriti (Impression) and deeper this impression is, the stronger our retention is. Our brain is divided into two parts- left brain and right brain. These parts of the brain are sub-divided by a wall of fibers called as corpus callosum.

There are innumerable brain cells called neurons in our brain. We have a very complex nexus of neuron networks.

Diagram of brain cells (Neurons)
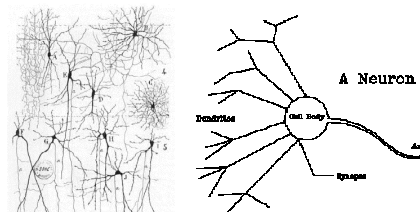
Levels of Mind

There are the four levels of Mind: Conscious level, Subconscious level, Super Conscious level and Unconscious level.

About Mind States

Our Mind has three states: wakening state, dreamless sleep state and dreaming state. Our Conscious mind is active only in the wakening state and in rest of the states, others three levels are active.

About Sub-conscious Mind

- It is the powerful mind that has been storing all kind of information since the day we were born. Even we have stored past births karmas (Psychic impressions) in this mind only. It stores the information that we are not consciously aware of. It works under self hypnosis.

- This Mind stores all the information in terms of mental pictures.

- It is a vast repository of images.

- It has photographic memory. It can easily recall the mental images.

- It deals with our imagination power. So, the most seminal point is to nurture it.

- It can be nurtured through self hypnosis process by giving it auto instructions.

- It is the super computer of our brain.

- It works according to intra cellular programming.

The Three important processes of Memory

- Encoding –It is the process of translating information into neural codes (Brain language) that will be retained in memory.

- Storage –It is the process of retaining neural coded information over time.

- Retrieval –It is the process of recovering information from memory storage.

ENCODING METHOD OF MEMORY

This is the most important method of the memory which is used to encode the abstract data. First, we shall understand the word encoding. This is the process of converting abstract data (texts, alphabets, characters and digits) into specific language called brain language. Our brain understands photographic language. We will convert abstract words into the words called as Substitution words or link words or key words also. It means we will memorize abstract words with the help of link words. Now, we will understand this process with the help of some examples.

Say for example, we want to encode the names of countries and its capital.

Albania is the country and the capital is Tirane.

Now, Albania is an abstract word. We can convert this word Albania into a tangible word Album. We will convert the word Tirane into the word Rain. Now in this process, the word Album has same pronunciation as the word Albania. Similarly, the word Rain has same sound as the word Tirane.

Similarly, we can make the link word for any abstract word. We just need to practice this process.

BASIC LAWS OF THE MEMORY

1. Law of Visualization
2. Law of Association

Law of Visualization:-

Our thought process is completely based upon images/pictures. Even we can't utter a single word without looking at some picture on our mental screen. Therefore, whatever we need to memorize should be converted into mind images called as the brain language.

Law of Association:-

Association means Linking or Connection. This is the association between two pieces of information. One of the information is already there in our Brain. Second information is in the outer world which we are to memorize. This Law establishes the connection between these two pieces of information.

Now, we will learn how to link two objects. Say, for example, there are two objects- Door and phone, we can associate these two objects by making an imagination in which a Phone is hanging on the Door.

Say for example, we want to memorize that the machine used by blind people to read was discovered by Louis Braille.

Now first we will encode this information. The word Louis Braille can easily be encoded into the word Rail (*Braille*). Now we can imagine a situation where we are looking a train which is moving with fast speed containing all Blind People. This visualization will help us to recall this information even after the long time.

Memorizing Vocabulary with Memory Methods

Say for example, the word we want to memorize is Persuade that means to convince or to influence. Now, we can easily encode the word Persuade into the word Purse with the help of Encoding method. Now, we can imagine a woman being persuaded to buy a purse.

With the same method we can memorize many words of the English Language.

With the help of these Laws and Memory methods you can memorize Vocabulary, Abbreviations, Definitions, Facts, Rules, Speeches, Essay, Long answers with subheadings, Numbers, Formulae, Numerical values, Reactions, Dates, Notes, Quotations, Lecturers etc in Academics and Names, Faces, Numbers, Lists, Telephone numbers, Routes, Directions, Time Table, Events, Meetings, Appointments, Promises,

Birthdates, Important Dates, Calendar, Playing Cards, Headlines, Price, Key points (To do list) etc in Daily Life.

Following are the important tips that should be followed for enhancing Memory Power

1. The most important thing is to get up early before the sun rise. Because at that time, our mind vibrates at very high frequency.

2. We should drink enough water regularly because water excretes harmful toxins from the body.

3. We should drink water kept in copper container after getting up in the morning as it energizes our brain.

4. We should have any liquid like water, milk, juice etc. while sitting, not while standing.

5. We should always prefer a balanced and vegetarian diet.

6. We should not pour warm water directly on our head as this deactivates our neurons.

7. We should take 4-5 leaves of Tulsi empty stomach with water except Sunday and Wednesday.

8. We should offer water to rising sun. This activity enhances our mental intellect and wisdom to great extent and it has been proved scientifically.

9. One should recite Sarasvatya mantra for better retention as it enhances our concentration power.

10. We can nurture our brain by performing the most remarkable pranayam called Bhramri pranayam which produces vibrations and sound like a hymn. These vibrations reach to the neuron network of our brain and incessantly activate them. This Pranayam should be done with empty stomach for 15 to 20 minutes.

11. We should touch our palate with our tongue while studying. It helps to have better retention.

12. We should keep the memory boosting device called shri yantra at the distance of around 2 ft. at eye level and while concentrating on the dot designed in the middle of the shri yantra, our attention will go at different geometrical figures and it will amazingly enhance your memory.

13. Our Study position should be in north east direction with Gyan mudra for better and quick retention.

14. We should study after regular intervals.

15. We should program our subconscious mind with positive auto instructions. Just say to yourself, I have great and strong memory power".

16. We should concentrate on our Agya chakra for invoking our hidden potential.

17. We should take stroll while studying.

18. We must think positive and creative.

19. If you are right handed, then you should use your left hand also. It will develop synchronization between left and right hemisphere of brain.

20. We should do every work with a thought. We should have a keen observation power.

21. We should try to imagine lot of objects on our mind screen. This will strengthen our imagination power.

22. We should do all the things with proper concentration and avoid vagrant thoughts.

23. We should take cow milk and ghee instead of buffalo's for making our mind active.

24. Amount of Fats and oil should be reduced from our diet.

25. We should follow the fundamentals of celibacy and self restraint.

26. We should avoid the use of mobile phones. if there is any urgency, we can use it on our left ear with proper gap.

27. We should cover our head in sunlight especially in summers as it is very harmful for our neuron cells.

28. Smoking and drinking alcohol are the biggest hurdles in the enhancement of memory power. So, avoid these bad habits.

29. We must avoid tea and coffee during night.

30. We should take proper and sound sleep as it is very important for our memory. This gives complete relaxation to our mind.

31. We should avoid studying overnight.

CONCLUSION

We may now conclude that human brain is the super powerful engine which can generate connections through which we can empower the Brain-ware. We can bring physical changes in the brain by using above mentioned methods. Memory Association is the best knowledge management methodology. This can also help computer scientists to research in various fields like Cognitive informatics, Artificial Intelligence, cognitive psychology, knowledge engineering and cognitive Memory.

FUTURE SCOPE

The Future scope of the area of Brain-ware is to redevelop computer memory to function like human memory. We can change the computing into relational metaphor instead of numerical metaphor of computer's memory. Thus, the progress in the Brain-ware can help the AI Scientists to develop advanced robots.

About the Authors

Mr. Virender Mehta

Virender Mehta has earned the reputation of "World Record Holder in Memory"awarded by the most prestigious book LIMCA BOOK OF WORLD RECORDS for memorizing 80,000 words from Oxford Advanced Learners Dictionary with page nos. He is a postgraduate in Computer Sciences and Engineering and is an Asstt. Professor at NCCE. His talent is acknowledged and admired globally. He has been a research scholar in the field of human memory and soft skills development. He is credited with many appraisals and awards for his incredibly strong memorising skills. He is the one amongst 25 Unusual Indians surveyed by THE WEEK Magazine. World's No.1 reality show 'SHABAASH INDIA' invited him to exhibit his memorising skills and awarded him with the Certificate of Excellence for his memorising potential. He is a trainer, speaker & author of the best-selling books: "The Handbook of Powerful Memory" and "Unlock your Memory Genius". He has conducted many seminars and workshops nationally addressing more than 10 lakh audience and he has a very rich experience in conducting training programmes on human memory development, soft skills and personality development. He is widely acclaimed in the national print and electronic media like Zee News, IBN 7, DD News, MH1 News, JANMAT News and the radio broadcasting FM. His Articles have been published in The Times of India, The Tribune, The Metro, Danik Jagran, Danik Bhaskar and OUTLOOK and THE WEEK magazine.

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